CURRENT AFFAIRS ‘QUICK REVISION’
PRELIMS 2020
(PART 3)

16th April to 15th August 2020
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• 66-million-year-old egg found in Antarctica “The Thing”
• Preventing the Next Pandemic: Zoonotic diseases and How to Break the Chain of Transmission Report
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● Postal Ballot System
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● Compulsory Licensing
● Andhra Pradesh Panchayat Raj (Second Amendment) Ordinance, 2020
● Digital Accountability and Transparency Act
● Election Commission’s Power to Delay Polls
● NATGRID and NCRB
● Second Voluntary Review of SDG
● e-SamikSha Platform

● Narcotic Drugs and Psychotropic Substances (NDPS) Act
● The Epidemic Diseases (Amendment) Ordinance, 2020
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● Nutrient Based Subsidy
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● NAIMISHA 2020
● Talamaddale
● Pashupatinath Temple
● Axone
● Chaolung Sukapha
● International Day of Yoga
● Variyamkunnath Kunjahammed Haji
● Mar Thoma Church
● Indira Gandhi National Centre for the Arts
● Tangam Community and their Language
● Mongolian Kanjur
● Dharma Chakra Day
● Raja Parba Festival
● Raja Ravi Verma
● Khongjom Day Celebrated
● World Heritage Day
● National List of Intangible Cultural Heritage
● Central Vista Redevelopment Project
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● Global Basava Jayanti
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● Pulitzer Prize
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● Maharana Pratap
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● Toda Embroidery
● Gandhi Peace Prize
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● International Museum Day
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● Purandara Dasa
● Chardham Pariyojna
● Gopal Krishna Gokhale
● Veer Savarkar
● Hanko
● Ramkinkar Baij
● Madhubani Paintings
● Bal Gangadhar Tilak
● Chandra Shekhar Azad
● Natesa & Pratihara Architecture
● Subhash Chandra Bose Aapda Prabandhan Puraskar
● Jyotirao Phule
● Gandhi-King Scholarly Exchange Initiative Act
● Abanindranath Tagore
● Quit India Movement
● National Flag of India
● U.K. to issue Coin to Honour Gandhiji
● Nagara Architecture of Ayodhya’s Ram Mandir
● Thenzawl Golf Resort
● Museums for Tribal Freedom Fighters

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● PM SVANidhi
● SWADES
● Sahakar Mitra
● World Day Against Child Labour
● Garib Kalyan Rojgar Abhiyan
● Global Trends Report
● End Violence Partnership:

● Animal Husbandry Infrastructure Development Fund

● World Drug Report 2020
● Nasha Mukt Bharat: Annual Action Plan (2020-21)
● State of World Population Report 2020
● The Sample Registration System – Statistical Report
● Disabled are entitled to same benefits of SC/ST quota
● Extension of Pradhan Mantri Ujjwala Yojana (PMUY)

● Govt notifies draft rules for Code on Wages

● Start-up Village Entrepreneurship Programme (SVEP)
● Agri-Infra Fund
● Mukhyamantri Matru Pushti Uphaar
● Indira Rasoi Yojana
● Mukhyamantri SHRAMIK (Shahri Rozgar Manjuri For Kamgar)
● Tribal Cooperative Marketing Development Federation of India (TRIFED)
● GOAL (GOING ONLINE AS LEADERS)
● Godhan Nyay Yojana
● Special Window for Affordable and Mid Income Housing(SWAMIH) fund
• Istanbul Convention
• Operation Muskaan
• Samarth programme
• Women Entrepreneurship and Empowerment initiative
• Khadi Agarbatti Atma Nirbhar Mission
• Parivar Pehchan Patra
• Economically Weaker Sections (EWS) Quota
• SC’s verdict on Hindu women’s inheritance rights
• Invalid Pension
• The Global Report on Food Crises 2020 (GRFC)
• Achieving Zero Hunger by 2030 in doubt, UN report warns
• Global Multidimensional Poverty Index (MPI) 2020
• India joins 'Alliance for Poverty Eradication' at UN as founding member
• International Religious Freedom Alliance
• Draft Transgender Persons (Protection of Rights) Rules, 2020
• TRIFED’s Virtual Office

Education

• Global Education Monitoring Report 2020
• Digital Learning Platform “Skills Build Reignite
• Project ‘Strengthening Teaching-Learning and Results for States Program (STARS)
• QS World University Rankings 2021
• India Rankings 2020

• PRAGYATA Guidelines for Digital Education
• Play Little, Study Little Scheme
• Education for Justice (E4J) initiative
• DIKSHA platform
• Global Education Coalition
• Prime Minister’s Research Fellows (PMRF) Scheme
• National Test Abhyas
• VIDYADAAN 2.0
• Aatma Nirbhar Bharat Abhiyaan: Technology Driven Education
• National Education Policy, 2020
• Manodarpan Initiative
• NISHTHA Programme
• INDSAT exam under ‘Study in India' Programme
• D.P Singh Committee
• Higher Education Funding Agency (HEFA)

Health

• Rapid Antigen Detection Tests
• Airborne Transmission
• Oropharyngeal Secretions
• RECOVERY Trial
• Solidarity Trial
• Global Vaccine Summit
• Global Outbreak Alert and Response Network (GOARN)
• Bubonic Plague
• Kawasaki disease
• Kala Azar Disease
• Healthcare & Hygiene EXPO 2020
• Global Nutrition Report 2020
• Pooled Testing
• Cytokine Storms
• Science and Technology of Yoga and Meditation (SATYAM)
• Covid-19 Sample Collection Kiosk (COVSACK)
• Chitra GeneLAMP-N
• Post-Intensive Care Syndrome (PICS)
• Medicine tried For COVID-19
• Feluda (Fncas9 Editor Linked Uniform Detection Assay)
• Telemedicine and Telehealth Care
• Chitra Acrylosorb Secretion Solidification System
• Koi Sleepy Disease
• Madhuban Gajar
• World Chagas Disease Day
• Indian Initiative on Earth BioGenome Sequencing (IIEBS)
• Alzheimer Inhibitor Ber-D
• Immunity Passport
• Vertical transmission
• Polio-fighting strategy of India
• African Swine Fever (ASF)
• COVID Action Platform
• India’s COVID-19 Social Protection Response Programme
• Report On Immunisation
• Sero-Surveillance
• First indigenous vaccine for infant pneumonia approved
• The Advanced Persistent Threat 29 (APT-29)
• WHO launches Covid-19 law lab
• COVAX Alliance
• COVAX Facility
• BelYo, India’s first Covid-19 blockchain platform
• Pradhan Mantri Jan Arogya Yojna (PM-JAY)
• Smallpox
• Malaria
• ChAdOx1 COVID-19 Vaccine
• Covishield
• Inflammageing
• lymphocyte
• Electronic Vaccine Intelligence Network
• Tick-Borne Virus
• Salmonella Infection
Miscellaneous

Person In News

- J.K. Rowling
- Game of Life
- John Hume

Sports

- NADA App by Sports Ministry
- World Games
- India to Host Asian Boxing Championship
- Khelo India Youth Games 2021

Awards/Prizes

- South Korea To Fete Indian Army Officer
- Festival of Innovation & Entrepreneurship (FINE)
- Prime Minister’s Awards for Excellence in Public Administration 2020

Important Dates
India Ideas Summit

- The India Ideas Summit was held virtually by the U.S. Chamber of Commerce.
- The Summit was hosted by the US-India Business Council (USIBC).
- India Ideas Summit has become an institution, convening leaders in business, government and society from across the United States and India.
- The theme for this year’s India Ideas Summit is ‘Building a Better Future’.
- USIBC, formed in 1975, represents top global companies operating across the United States and India.
- USIBC serves as the premier voice of industry, to enlighten and encourage the private sectors of both India and the United States to enhance investment flows.

Debt Voluntary Retention Route (VRR)

- The Reserve Bank of India (RBI) permitted more time to foreign portfolio investors (FPIs) in adhering with the condition under the Voluntary Retention Route (VRR).
- **What is VRR?**
  - RBI introduced a separate channel, the ‘Voluntary Retention Route’ in 2019 to enable FPIs to invest in debt markets in India.
  - Investments through VRR are free from macro-prudential and other regulatory prescriptions applicable to FPI investments in debt markets, provided FPIs voluntarily commit to retain a required minimum percentage of their investments in India for a particular period. The minimum retention period was kept at three years.
- **Aim:** The VRR channel is aimed at attracting long-term and stable FPI investments into debt markets, while providing FPIs with operational flexibility to manage their investments.
- **Eligibility:** Any entity registered as an FPI with SEBI is eligible to participate through this Route.
- VRR scheme allows FPIs to participate in repos and also invest in exchange traded funds that invest in debt instruments.

Credit Risk Fund

- Franklin Templeton Mutual Fund, the ninth largest in the country, has decided to wind up six yield-oriented managed credit funds, one of them being a credit risk fund.
- Credit risk funds are debt funds that play on the principle of high-risk-high-reward.
- While higher-rated bonds of companies are more secure and offer lower interest rates, credit risk funds generally invest in lower-rated bonds which offer higher return but also carry a higher risk.
- By definition, credit funds invest 65 % of the portfolio in bonds that are AA rated or below, and investors must be aware that they are investing in schemes that are investing in lower-rated papers.
Open Budget Survey

- International Budget Partnership (IBP) has released Open Budget Survey.
- It evaluates for each country, the availability of eight key budget documents of the Central or Federal Government, and assesses whether these are made public, in a timely manner, and provide comprehensive information.
- India has been placed at 53rd position among 117 nations in terms of budget transparency and accountability. India performs well in publishing timely and relevant information in the audit reports and in-year reports. However, absence of a published Pre-Budget Statement and not bringing out a Mid-Year Review in 2018-19 pulled down the transparency score for the Union Budget of India.
- Headquartered at Washington DC and established in 1997, IBP is an independent nonprofit corporation, which collaborates with civil society around the world to use budget analysis and advocacy as a tool to improve effective governance and reduce poverty.

Lifeline Udan

- As part of India’s war against the novel Coronavirus pandemic, the Ministry of Civil Aviation has launched “Lifeline Udan”.
- Under Lifeline Udan initiative, flights are being operated for the movement of essential and medical supplies across the nation.
- The cargo of Lifeline Udan includes COVID-19 related medical equipment, reagents, enzymes, Personal Protective Equipment (PPE), testing kits, masks, gloves as well as other accessories required by Corona Warriors.

Bank Of Schemes, Ideas, Innovation And Research Portal

- Union Minister of MSME launched Bank of Schemes, Ideas, Innovation and Research portal.
- The Portal gives access to all Schemes of Union, State and UT Governments. It has the provision for uploading Ideas, Innovations & Researches in the sector.
- The portal has unique features of not only crowd sourcing of Ideas, but also evaluation and rating the ideas by crowd sourcing. It can also facilitate inflow of venture capital, foreign collaboration etc.
- The portal will benefit the potential entrepreneurs as One stop compendium of Ideas, innovation and research ready for commercialization. The Rating of Ideas can be seen publicly which will help in decision making.

India’s Eight Core Sectors

- The output of India’s eight core sectors shrinks by 6.5% in March 2020 amid coronavirus lockdown.
- The Index of Eight Core Industries captures the output of coal, crude oil, natural gas, steel, cement, fertilisers, electricity, and refinery products, which has a 40.27% weight in the Index of Industrial Production (IIP).
- Weightages covered in Index of Eight Core Industries (ICI): Refinery Products (28.04%) > Electricity (19.85%) > Steel (17.92%) > Coal (10.33%) > Crude Oil production (8.98%) > Natural Gas (6.88%) > Cement (5.37%) > Fertilizers (2.63%).
IIP is compiled monthly by National Statistics Office (NSO), Ministry of Statistics and Programme Implementation six weeks after the reference month ends. The base year for IIP is 2011-2012.

**BharatMarket**

- Confederation of All India Traders (CAIT) has announced to launch a national e-commerce marketplace ‘BharatMarket’ for all retail traders in collaboration with several technology partners.
- The marketplace will integrate capabilities of various technology companies to provide end-to-end services in the logistics and supply chains from manufacturers to end consumers, including deliveries at home.
- This endeavour aims to bring 95 per cent of retail traders onboard the platform, who will be the shareholders and the portal will be run exclusively by the traders.

**Purchasing Managers Index (PMI)**

- According to the IHS Markit purchasing managers index (PMI) survey, India’s manufacturing activity witnessed an unprecedented contraction in April amid national lockdown restrictions.
- PMI is an index of the prevailing direction of economic trends in the manufacturing and service sectors. It is calculated separately for both sectors and then a composite index is constructed.
- PMI was originally developed in 1948 by the US-based non-profit group namely Institute of Supply Management (ISM). Now it is published in a variety of different places, depending on the company and country.
- For India, the PMI Data is published by Japanese firm Nikkei but compiled and constructed by Markit Economics.
- The PMI is based on five major survey areas: new orders, inventory levels, production, supplier deliveries, and employment.
- The headline PMI is a number from 0 to 100. A PMI above 50 represents an expansion, anything below indicates contraction, and a reading at 50 indicates no change.

**Saras Collection**

- It is a unique initiative of Government e Marketplace (GeM) and the Deen Dayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), Ministry of Rural Development.
- The Saras collection showcases daily utility products made by rural self-help groups. It aims to provide Self Help Groups (SHGs) in rural areas with market access to Central and State Government buyers.
- Under the initiative, sellers from SHGs will be able to list their products in 5 product categories, namely (i) handicrafts, (ii) handloom and textiles, (iii) office accessories, (iv) grocery and pantry, and (v) personal care and hygiene.

**SARFAESI Act**

- The Supreme Court recently held that the provisions of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act) will be applicable to cooperative banks, and not just commercial banks.
This move helps co-operative banks avoid inordinate delays in the recovery of their bad loans due to the involvement of civil courts and co-operative tribunals.

What is SARFAESI Act?

- The SARFAESI Act was passed on December, 2002, in order to lay down processes to help Indian lenders recover their dues quickly. As per the SARFAESI Act, if a borrower defaults on a loan financed by a bank against collateral, then the bank gets sweeping powers to recover its dues from the borrower.

- After giving a notice period of 60 days, the lender can take possession of the pledged assets of the borrower, take over the management of such assets, appoint any person to manage them or ask debtors of the borrower to pay their dues too, with respect to the asset.

- Before this Act took effect, financial institutions had to take recourse to civil suits in the courts to recover their dues, which is a lengthy and time-consuming process.

- One of the major drawbacks of the Act is that it is not applicable to unsecured creditors.

Global Energy Transition Index

- The World Economic Forum released the Energy Transition Index (ETI) which takes into account 115 economies.

- It benchmarks the current performance of their energy systems across three indicators -
  a) Economic development and growth;
  b) Environmental sustainability; and
  c) Energy security and access

- Sweden has topped the Index for the third consecutive year and is followed by Switzerland and Finland in the top three. France (8th) and the UK (7th) are the only G20 countries in the top ten.

- India has moved up two positions to rank 74th with improvements on all key parameters of economic growth, energy security and environmental sustainability.

- The World Economic Forum, based in Switzerland, is an NGO, founded in 1971. The WEF’s mission is cited as "committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas"

- Other Major Reports Published by WEF:
  i) Global Competitiveness Report
  ii) Global IT Report
  iii) Global Gender Gap Report
  iv) Global Risk Report
  v) Global Travel and Tourism Report

Global Energy Review 2020


- The report projects that energy demand will fall 6% in 2020 – seven times the decline after the 2008 global financial crisis. Global CO2 emissions were over 5% lower in first quarter of 2020 than in 2019.
About IEA

- The IEA is a Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.
- IEA consists of 30 member countries, 8 association countries, and 2 accession countries. A candidate country to IEA must be a member country of the OECD. In addition, it must demonstrate several requirements. These are:
  - Crude oil and/or product reserves equivalent to 90 days of the previous year's net imports, to which the government has immediate access and could be used to address disruptions to global oil supply;
  - A demand restraint programme to reduce national oil consumption by up to 10%;
  - Legislation and measures to ensure that all oil companies under its jurisdiction report information upon request; and legislation and organisation to operate the Co-ordinated Emergency Response Measures (CERM) on a national basis;
  - Measures in place to ensure the capability of contributing its share of an IEA collective action.
- India has joined the IEA as an associate member in 2017.

Kisan Sabha App

- The Central Road Research Institute (CRRI), a CSIR lab, has come up with an app called Kisan Sabha to connect farmers to supply chain and freight transportation management system.
- Aim: To provide the most economical and timely logistics support to the farmers and increase their profit margins by minimizing the interference of middlemen and directly connecting with the institutional buyers.
- Features:
  - It acts as a single stop for every entity related to agriculture, be they farmers, dealers of fertilizers/pesticides, or mandi dealers who want to connect to more farmers or truckers who invariably go empty from the mandis.
  - Provides a platform for people who want to buy directly from the farmers.
  - Help in providing the best market rates for crops by comparing the prices in the nearest mandis, booking of freight vehicle at the cheapest cost.

Geotextile

- Government approved the use of Coir Geotextile in rural road construction under Pradhan Mantri Gram Sadak Yojana (PMGSY-III). As per the guidelines, 5% length of the rural roads under PMGSY-III will be constructed using Coir Geotextiles.
- Geotextiles are permeable textile structures made of polymeric materials and are used mainly in civil engineering applications for improving the soil behaviour, preventing soil erosion and help consolidation of the soil.
Geotextiles can be classified on the basis of their **functions** as: Protection, fluid transmission, separation, reinforcement, tensional membrane, tensile member and barrier.

**Properties of Coir Geotextiles**: 100% natural and bio-degradable, capable of being customised to specific requirements, High tensile strength of coir protects steep surfaces from heavy flows and debris movement, High durability permits plant and soil establishment, natural invasion and land stabilization.

**Calamity Cess**
- Central government is considering a **calamity cess on Goods and Services Tax (GST)** to tide over the economic crisis triggered by the coronavirus pandemic.
- **Kerala is the only state to have levied such a cess** using the Constitutional provision, Section (4) (F) of Article 279 A, which refers to “any special rate or rates for a specified period to raise additional resources during any natural calamity or disaster”.
- **The GST (Compensation to States) Act, 2017 also provides for the imposition of cess** up to the rate of 15 per cent ad valorem (based on estimated value) on “any other supplies”.

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<td>- It is levied <strong>over and above the tax liability</strong> of a taxpayer.</td>
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<td>- A cess is usually imposed additionally when the state or the central government looks to raise <strong>funds for specific purposes</strong>.</td>
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<tr>
<td>- If the cess collected in a particular year goes unspent, it <strong>cannot be allocated for other purposes</strong>.</td>
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**World Intellectual Property Day 2020**
- World Intellectual Property Day 2020 is being celebrated on April 26 with the theme “**Innovate for a Green future**”.
- The event was established by the World Intellectual Property Organization (WIPO) in 2000 to "**raise awareness of how patents, copyright, trademarks and designs impact on daily life**."
- WIPO is the global forum for intellectual property (IP) services, policy, information and cooperation. It is a **self-funding agency of the United Nations**, with 193 member states.
- **Headquarters**: Geneva, Switzerland

**West Texas Intermediate (WTI)**
- US oil markets created history when prices of West Texas Intermediate (WTI), the best quality of crude oil in the world, fell to “minus” $40.32 a barrel in New York, which is the lowest crude oil price ever known.
- West Texas Intermediate (WTI) crude oil is a specific grade of crude oil and one of the main three benchmarks in oil pricing, along with **Brent and Dubai Crude**.
- WTI is known as a **light sweet oil** because it contains 0.24% sulfur, making it "sweet," and has a low density, making it "light."
- It is the underlying commodity of the New York Mercantile Exchange's (NYMEX) oil futures contract and is considered a high-quality oil that is easily refined.
Kisan Rath Mobile App

- This mobile application is developed by the National Informatics Centre to facilitate farmers and traders in searching transport vehicles for movement of Agriculture and Horticulture produce.
- Transportation will become easier with this app as it will help farmers and traders for transporting produce from farm gate to mandi and mandi to mandi all over the country. The App will also facilitates traders in transportation of perishable commodities by Refrigerated vehicles.

Ways and Means Advances

- Finance Ministers of three states, said that the RBI decision to allow 60 per cent higher borrowing under Ways and Means Advances (WMA) from what it was in March 30, 2020, is inadequate.
- The WMA are short-term loan facilities which allow the Centre and states to borrow funds from the RBI at repo rate and bridge the mismatch between expenditure and receipts.
- These loans have a three-month tenure, and states are allowed an overdraft of 21 days.
- The governments are, however, allowed to draw amounts in excess of their WMA limits, called Special Drawing Facilities. The interest on such overdraft is 2 percentage points above the repo rate. Further, no state can run an overdraft with the RBI for more than a certain period.

Special Drawing Rights (SDR)

- Recently India's Finance Minister said that the country could not support a general allocation of new Special Drawing Rights by the International Monetary Fund (IMF) because it might not be effective in easing coronavirus-driven financial pressures.
- The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries’ official reserves. The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. SDRs can be exchanged for these currencies.
- The value of the SDR is calculated from a weighted basket of major currencies, including the U.S. dollar, the euro, Japanese yen, Chinese yuan, and British pound. Currencies included in the SDR basket have to meet two criteria: the export criterion and the freely usable criterion.
- The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world’s trading and financial systems.

Change In FDI Policy

- In a move that will restrict Chinese investments, the Centre has made prior government approval mandatory for foreign direct investments from countries which share a land border with India.
- Previously, only investments from Pakistan and Bangladesh faced such restrictions. Pakistani investors face further restrictions in requiring government approval for FDI in defence, space and atomic energy sectors as well.
- Investors from countries not covered by the new policy only have to inform the RBI after a transaction rather than asking for prior permission from the relevant government department.
- The decision came days after China’s central bank, the People’s Bank of China (PBoC) had raised its shareholding in HDFC to over 1 per cent.
International Monetary and Financial Committee (IMFC)

- Union Minister of Finance & Corporate Affairs attended through video-conference the Plenary Meeting of the IMFC.
- IMFC is the Ministerial-level committee of the International Monetary Fund (IMF). The size and the composition of the IMFC mirrors that of the Executive Board.
- **Composition:** The IMFC has 24 members who are central bank governors, ministers, or others of comparable rank. Each member country and each group of member countries that elects an Executive Director appoints a member of the IMFC.
- **Functions:** The IMFC advises and reports to the IMF Board of Governors on the supervision and management of the international monetary and financial system. It also considers proposals by the Executive Board to amend the Articles of Agreement and advises on any other matters that may be referred to it by the Board of Governors.
- Although the IMFC has no formal decision-making powers, in practice, it has become a key instrument for providing strategic direction to the work and policies of the Fund.

Strategic Petroleum Reserves (SPR)

- India has decided to fill the strategic petroleum reserves (SPR) to their full capacity in view of the slump in crude prices.
- A strategic petroleum reserve are essentially huge stockpiles of crude oil; an emergency store of crude oil to tide over severe supply shocks of this critical fuel.
- **Indian Strategic Petroleum Reserves Ltd (ISPRL):** It is a special purpose vehicle under the Oil and Gas Ministry for constructing strategic petroleum reserves in India.
- **List of strategic petroleum reserves in India:**
  - ISPRL has constructed three strategic petroleum reserves at Visakhapatnam on the East Coast, and at Mangaluru and Padur on the West Coast. These facilities, with total capacity of 5.33 million tonnes, can meet 10 days of India’s crude oil requirements.
  - In July 2018, the government approved the construction of two more reserves at Chandikhol in Odisha and Padur in Karnataka, having an aggregate capacity of 6.5 million tonnes. The new facilities can provide additional supply for about 12 days.

Geographical Indication (GI) Tags

The following products have received GI tags recently

- **Thanjavur Netti Works (pith works):** It is made from Netti (pith) from a marshy plant called as Aeschynomene Aspera. The Netti Works are widely found in the Brihadeeshwara Temple, Hindu Idols, Garlands, door hangings and decorative pieces in Tamil Nadu
- **Tamil Nadu’s Arambavur Wood Carvings:** It primarily made out of the wooden logs of, Mango, Lingam tree, Indian Ash tree, Rosewood, Neem tree are used for making sculptures. Unique feature of the craft is that the entire design carved out of a single block of wood given that a single error could damage the entire piece.
- **Manipur black rice:** Popularly known as Chak-Hao, a scented glutinous rice which has been in cultivation in Manipur over centuries, is characterised by its special aroma. It is normally eaten during
community feasts and is also served as Chakhoa kheer. Chak-Hao has also been used by traditional medical practitioners as part of traditional medicine.

- **Jharkhand’s Sohrai Khovar painting**: It is a traditional and ritualistic mural art being practised by local tribal women during local harvest and marriage seasons using local, naturally available soils of different colours in the area of Hazaribagh district of Jharkhand. The style features a profusion of lines, dots, animal figures and plants, often representing religious iconography.

- **Telangana’s Telia Rumal**: It involves intricate handmade work with cotton loom displaying a variety of designs and motifs in three particular colours — red, black and white. Telia Rumals were worn as a veil by princesses at the erstwhile court of the Nizam of Hyderabad; and as a turban cloth by Arabs in the Middle East. Telia Rumal can only be created using the traditional handloom process and not by any other mechanical means as otherwise, the very quality of the Rumal would be lost.

- **Gorakhpur terracotta**: It is a centuries-old traditional art form, where the potters make various animal figures like, horses, elephants, camel, goat, ox, etc. with hand-applied ornamentation. The entire work is done with bare hands and artisans use natural colour. Some of the major products of craftsmanship include the Hauda elephants, Mahawatdar horse, deer, camel, five-faced Ganesha, single-faced Ganesha, elephant table, chandeliers, hanging bells etc.

- **Kashmir Saffron**: Kashmir saffron is cultivated and harvested in the Karewa (highlands) of Jammu and Kashmir. It is the only saffron in the world grown at an altitude of 1,600 m to 1,800 m AMSL (above mean sea level). The unique characteristics of Kashmir saffron are its longer and thicker stigmas, natural deep-red colour, high aroma, bitter flavour, chemical-free processing, and high quantity of crocin (colouring strength), safranal (flavour) and picrocrocin (bitterness). Iran is the largest producer of saffron and India is a close competitor.

- **Kadalai Mittai**: Kovilpatti kadalai mittai is a candy made of peanuts held together with glistening syrup, and topped with wisps of grated coconut dyed pink, green and yellow. It is made using all natural ingredients such as the traditional and special ‘vellam’ (jaggery) and groundnuts and water from the river Thamirabarani is used in the production, which enhances the taste naturally.

**Cooperative Banks Under RBI Supervision**

- The President has promulgated the Banking Regulation (Amendment) Ordinance, 2020, to bring all urban cooperative banks and multi-state cooperative banks under the supervision of RBI.
- Currently, these banks come under dual regulation of the RBI and the Registrar of Co-operative Societies, resulting in regulatory and supervisory lapses. Also, RBI till now has no powers to draw up an enforceable scheme of reconstruction of a co-operative bank.
- The Ordinance has empowered RBI to supersede the Board of Cooperative Banks for up to five years.
- It also allows a cooperative bank to issue equity shares, preference shares, or special shares on face value or at a premium to its members or to any other person residing within its area of operation. Also, cooperative banks can issue unsecured debentures or bonds or similar securities with maturity of ten or more years to such persons. Such issuance will be subject to prior approval of RBI.
- The amendments do not affect existing powers of the State Registrars of Co-operative Societies under state co-operative laws. The amendments also do not apply to Primary Agricultural Credit Societies (PACS) or cooperative societies whose primary object and principal business is long-term finance for agricultural development.
Real Time Market (RTM) for Electricity

- The Ministry of Power and New & Renewable Energy has launched a **pan-India Real Time Market in electricity**. RTM is an organized market platform to enable the buyers and sellers pan-India to meet their energy requirement closer to real time of operation.
- It enables consumers, including distribution companies (discoms) and captive users, to buy power on exchanges **just an hour before delivery**. So far, the shortest period of trading in electricity in the country has taken place a day ahead of the market.
- RTM would be for every 30 minutes in a day based on double-sided closed auction with uniform price. The concept of “Gate Closure” has been introduced for bringing in the desired firmness in schedules during the hours of market operation. Buyers/sellers shall have the option of placing buy/sell bids for each 15-minute time block.
- National Load Despatch Centre-POSOCO is facilitating necessary automation in coordination with power exchanges.

FASTag

- The Ministry of Road Transport and Highways has decided to ensure capturing of FASTag details while registering or issuing fitness certificate to vehicles all over the country.
- FASTags are **prepaid rechargeable tags for toll collection** that allow automatic payment deduction from the FASTag, they are normally affixed on the windscreen of your vehicle.
- The device employs **Radio Frequency Identification (RFID) technology** for payments directly from the prepaid or savings account linked to it.
- **FASTags do not have any expiry date**, that is, they can be used as long as they are readable at the toll plaza and are not tampered.

ASEEM Portal

- **Ministry of Skill Development and Entrepreneurship (MSDE)** launched ‘Aatamanirbhar Skilled Employee Employer Mapping (ASEEM)’ portal to help skilled people find sustainable livelihood opportunities.
- ASEEM will provide employers a **platform to assess the availability of skilled workforce** and formulate their hiring plans. It shall help in providing real-time data analytics to NSDC and its Sector Skill Councils about the demand and supply patterns including - industry requirements, skill gap analysis etc.
- It is developed and managed by **National Skill Development Corporation (NSDC)** in collaboration with Bengaluru-based company Betterplace, specialising in blue collar employee management.

Digital India AatmaNirbhar Bharat Innovate Challenge

- **Ministry of Electronics and Information Technology**, along with the **Atal Innovation Mission**, are launching the ‘Atmanirbhar Bharat App Innovation Challenge.’
- The move came after the **Central government banned 59 Chinese apps**.
- It is to identify the best Indian Apps that are already being used by citizens and have the potential to scale and become world class Apps in their respective categories.
The challenge will run in two tracks, which are promotion of existing apps and the development of new apps.

Agriculture Infrastructure Fund

- The Union Cabinet has given its approval to a new pan India Central Sector Scheme-Agriculture Infrastructure Fund.
- The scheme shall provide a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.
- Under the scheme, Rs. One Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG) etc.
- All loans under this financing facility will have interest subvention of 3% per annum up to a limit of Rs. 2 crore for a maximum period of seven years. Further, credit guarantee coverage will be available under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme for a loan up to Rs. 2 crore.
- The fund will be managed and monitored through an online Management Information System (MIS) platform.

Rights Issues

- Reliance Industries Limited recently concluded its rights issue, raising a total of Rs 53,124 crore.
- A rights issues is a mechanism by which companies can raise additional capital from existing shareholders. The shareholders have the right to subscribe the shares in proportion to their existing holdings, in a pre-defined time period.
- Also, a rights issue is a more democratic approach to raising funds as it allows the existing shareholders the right to invest first in the company. The new shares are generally issued at a discounted price than the prevailing rate in the market.

Statistics Day

- Statistics Day of India is being celebrated on June 29, 2020 on the birth anniversary of Prof. P C Mahalanobis.
- Theme : "SDG- 3 (Ensure healthy lives and promote well-being for all at all ages) & SDG- 5 (Achieve gender equality and empower all women and girls)."
- Prasanta Chandra Mahalanobis (1893 –1972), a world-renowned statistician whose invaluable contributions led to the establishment of the National Statistical System in India. He is also called the father of Indian Statistics.
- He was one of the members of first Planning commission of free India. The Mahalanobis model, was employed in the Second Five Year Plan, which worked towards the rapid industrialization of India.

Indian Gas Exchange (IGX)

- Ministry of Petroleum and Natural Gas has launched the Indian Gas Exchange (IGX), which is the first nationwide online delivery-based gas trading platform.
• IGX has been incorporated as a **wholly owned subsidiary of the Indian Energy Exchange (IEX)**, which is India’s energy market platform.

• The exchange will allow buyers and sellers of natural gas to trade both in spot market and forward market for imported natural gas across three hubs — Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh.

**Periodic Labour Force Survey (PLFS)**

• According to the latest Periodic Labour Force Survey (PLFS), released by Ministry of Statistics and Programme Implementation, India’s unemployment rate has improved from the 45-year high of 6.1% in 2017-18 to 5.8% in 2018-19.

• PLFS is India’s first computer-based survey which gives estimates of key employment and unemployment indicators like the *labour force participation rate*, *worker population ratio*, *proportion unemployed* and *unemployment rate* in **rural households annually** and on a **quarterly basis for the urban households**.

• *Labour Force Participation Rate* is the percentage of people in the labour force (those who are working or seeking or available for work) in the population while the *Worker Population Ratio* is the percentage of employed people. The unemployment rate shows the percentage of people unemployed among the labour force.

**Liberalised Remittance Scheme (LRS)**

• In April 2020, Indians remitted just $499.14 million under the Liberalised Remittance Scheme (LRS) — a 61% decline from $1,287.91 million in the same month last year.

• LRS of the Reserve Bank of India (RBI) allows resident individuals, including minors, to remit a certain amount of money during a financial year to another country for investment and expenditure. The Scheme is **not available to corporates, partnership firms, Hindu Undivided Family (HUF), Trusts etc.**

• Resident individuals may remit up to **$250,000 per financial year**. This money can be used to pay expenses related to travelling, medical treatment, studying, gifts and donations etc

• Apart from this, the remitted amount **can also be invested in shares, debt instruments**, and be used to buy immovable properties in overseas market.

• Individuals can also open, maintain and hold foreign currency accounts with banks outside India for carrying out transactions permitted under the scheme.

**GI Tag for Basmati**

• The All India Rice Exporters’ Association (AIREA) has appealed to the government to protect the integrity of Basmati rice, after Madhya Pradesh (MP) has put pressure on the central government for seeking Geographical Indication (GI) tag for Basmati produced in 13 districts of MP.

• In 2010, Agricultural and Processed Food Products Export Development Authority (APEDA), got the **GI tag for Basmati rice for the region located in Indo-Gangetic Plains (IGP) below the foothills of the Himalayas** spread across seven states — J&K, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Western UP (26 districts) and Delhi.
According to APEDA, the origin and reputation of Basmati rice as a ‘long grain, aromatic rice’ from the IGP is found in tradition, folklore, scientific and culinary literature and political and historical records. It has been grown in this region from time immemorial.

MP started cultivation of varieties of Basmati rice only around the middle of the first decade of this century. The state claims that this rice possesses the same characteristics and qualities as that of the rice grown in the IGP.

Curbs On Public Procurement

- The Government of India amended the General Financial Rules 2017 to enable imposition of restrictions on bidders from countries which share a land border with India on grounds of national security.
- Bidders from these countries will be eligible only if they are registered with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). They will also be required to take mandatory political and security clearance from the Ministries of External and Home Affairs, respectively.
- The order takes into its ambit public sector banks and financial institutions, autonomous bodies, Central Public Sector Enterprises (CPSEs) and public private partnership projects receiving financial support from the government or its undertakings. It does not apply to procurement by the private sector.
- The central government has invoked the provisions of Article 257(1) of the Constitution to direct state governments to implement this order for all public procurement.
- Exceptions: Relaxation will be provided for the procurement of medical supplies for containment of COVID-19 till December 31. Also, the order for prior registration will not apply for countries to which the Indian government extends lines of credit or provides development assistance, even if it shares a land border with India. These are Bangladesh, Nepal, and Myanmar.

General Financial Rules are a compilation of rules and orders of Government of India to be followed by all, while dealing with matters involving public finances i.e. matters relating to revenue and expenditure of government. These rules and orders are treated as executive instructions. They were first introduced in 1947 and modified thereafter in 1963, 2005 and 2017.

Zoram Mega Food Park Scheme

The Ministry of Food Processing Industries recently operationalised the Zoram Mega Food Park (MFP), which is the first MFP in the state of Mizoram.

Mega Food Park Scheme

- It aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers. By doing so it aims to maximize value addition, minimize wastage, increase farmer’s income and create employment opportunities particularly in rural sector.
- The scheme is based on “Cluster” approach and envisages creation of state of art support infrastructure in a well-defined agri/horticultural zone for setting up of modern food processing units.
- Under the MFP Scheme, the Union government provides financial assistance upto Rs. 50 crore per MFP project. It is implemented by a Special Purpose Vehicle (SPV) which is a Body Corporate registered under the Companies Act.
Presently, 18 MFP Projects are under implementation in various states and 19 Mega Food Parks have already become functional. 6 of them are in the North eastern region.

Automotive Solutions Portal for Industry, Research and Education (ASPIRE)

- A technology platform for the automotive industry called ASPIRE has been made live in its initial version. It is a part of a mission by Department of Heavy Industry (DHI), to promote innovation, R&D and product development in India for various sectors.
- The key objective of this portal is to facilitate Indian Automotive Industry to become self reliant by assisting in innovation and adoption of global technological advancements by bringing together the stakeholders from various associated avenues.
- The International Centre for Automotive Technology (ICAT) is developing the ASPIRE technology platform.
- ICAT was established in 2006, as a leading world class automotive testing, certification and R&D service provider under the aegis of NATriP (National Automotive Testing and R&D Infrastructure Project). NATriP is a fully Government of India funded project which aims at creating core global competencies in automotive sector in India by facilitating seamless integration of Indian automotive industry with the world.

Financial Stability Report

The RBI has released its FSR, a biannual publication, that reflects the collective assessment of the sub-committee of the Financial Stability and Development Council (FSDC) on risks to financial stability and the resilience of the financial system.

Highlights Of The Report

- **Increase In NPA**: The gross nonperforming assets (GNPA) ratio of all scheduled commercial banks (SCBs) may increase from 8.5 per cent in March 2020 to 12.5 per cent by March 2021.
- **The capital to risk-weighted assets ratio (CRAR)** of Scheduled Commercial Banks edged down to 14.8% in March, from 15% in September 2019. This ratio could slide to down to 13.3% in March 2021 under the baseline scenario and to 11.8% under very severe stress scenario.
- **Bank credit**, which had considerably weakened during the first half of 2019-20, slid down further in the subsequent period with the moderation becoming broad-based across bank groups.
- **Total bilateral exposures** among entities in the financial system declined marginally during 2019-20; with the inter-bank market continuing to shrink and with better capitalisation of public sector banks (PSBs), there would be reduction in contagion losses to the banking system under various scenarios in relation to a year ago.

**Gramodyog Vikas Yojana**

- Ministry of Micro Small and Medium Enterprises (MSME) approved a programme for the benefit of artisans involved in manufacturing of Agarbatti under ‘Gramodyog Vikas Yojana.

**CRAR** is the ratio of a bank’s capital in relation to its risk-weighted assets and current liabilities. In other words, it measures how much capital does a bank has with it as a percentage of its total credit exposure.
• Initially four Pilot Projects will be started, including one in North Eastern part of the country. Each targeted cluster of artisans will be supported with about 50 Automatic Agarbatti making machines and 10 Mixing machines.

• Two major decisions by Govt of India i) placing the ‘Agarbatti’ item from “Free” trade to “Restricted” trade in the import policy and ii) enhancing the import duty from 10% to 25% on ‘round bamboo sticks’ used for manufacturing of Agarbatti, will help to boost the indigenous production of ‘Agarbatti’.

• Under this Mission, Khadi and Village Industries Commission (KVIC) will provide training, and assist artisans working in this area, with Agarbatti manufacturing machines.

Panel to Probe Alleged Violations by Rajiv Gandhi Foundation

• The Ministry of Home Affair has ordered an inter-ministerial committee to investigate Rajiv Gandhi Foundation, Rajiv Gandhi Charitable Trust and Indira Gandhi Memorial Trust.

• It has been alleged that the said foundation has violated various legal provisions of PMLA, I-T Act, FCRA etc. Also, the Indira Gandhi Memorial Trust is not a FCRA registered association. Despite this, it has been allegedly receiving donations including foreign donations.

Foreign Contribution and Regulation Act 2010 (FCRA)

• FCRA was enacted with the primary purpose of regulating the inflow of foreign contributions. It also ensures that the received foreign contributions are not utilized for illegal purposes. All charitable organizations in India receiving foreign contributions come under the purview of this Act.

• As defined in Section 3(1) of FCRA, 2010, the following are prohibited to receive foreign contribution:
  o A candidate for election;
  o Correspondent, columnist, cartoonist, owner, printer or publisher of a registered newspaper;
  o Judge, government servant or employee of any Corporation or any other body controlled on owned by the Government; Member of any legislature; Political party or office bearer thereof;
  o Organization of a political nature as may be specified under sub-section (1) of Section 5 by the Central Government.
  o Correspondent or columnist, cartoonist, editor, owner of the association or company referred to above point.

Currency Swap Pact with Central Bank of Sri Lanka

• The Reserve Bank of India has signed an agreement for extending a $400-million currency swap facility to Sri Lanka. Sri Lanka’s forex reserves were at $ 6.7 billion in June 2020 (India’s forex reserves were at a record high of $ 517.63 billion as on 17th July 2020).

• This agreement, which is valid till November 13, 2022, has been signed under the South Asian Association for Regional Cooperation (SAARC) Currency Swap Framework 2019-22.

India Digitization Fund

• Internet giant Google launched the Google for India Digitization Fund with a commitment to invest ₹75,000 crore (approximately $10 billion) over the next 5-7 years towards digitizing the Indian economy.
• The fund will focus on enabling affordable access to internet and information for Indians in their own language, building new products and services relevant to India’s unique needs, empowering small and medium businesses in their digital transformation, and leveraging technology and artificial intelligence (AI) for social good, including digital literacy, outbreak predictions, and support for rural economies.

**World’s Longest Subsea Power Cable**

• Construction work has begun in Lincolnshire on the world’s longest subsea power cable, which will run between Britain and Denmark to share renewable energy between the two countries. The 475-mile (765km) cable is a joint-venture between National Grid in the UK and Denmark’s Energinet.

• The UK has about 5GW of power cable capacity connecting Britain’s electricity system to power generated in the Netherlands, France and the Republic of Ireland.

**Arakunomics**

• Rockefeller Foundation has selected Naandi Foundation, Hyderabad-based non-profit, as one of the ‘Top 10 Visionaries’ in the world for the Food Vision 2050 Prize.

• The award recognised the application of Arakunomics model in regions of Araku, Wardha and New Delhi. Naandi’s vision titled “Arakunomics” was based on work with tribal farmers in Araku for nearly 20 years. It is a new integrated economic model that ensures profits for farmers, quality for consumers through regenerative agriculture.

• The economic model is a tribute to the tribal farmers of Araku region for the world class coffee produced and launched in Paris in 2017, as well as for the high carbon landscape transformation they did in over 955 villages, thereby planting 25 million trees.

• It follows an “ABCDEFGH” framework centering on: Agriculture, Biology, Compost, Decentralised decision-making, Entrepreneurs, Families, Global Markets, and ‘Headstands’, or turning current approaches on their head.

**Emergency Credit Line Guarantee Scheme (ECLGS)**

• Centre has expanded its credit guarantee scheme for MSMEs to cover loans given to larger firms, as well as to self-employed people and professionals who have taken loans for business purposes.

• ECLGS was rolled out in May as part of the Centre’s Aatmanirbhar package in response to the COVID-19 crisis. It is a 100% collateral-free MSME loan, which is being provided by the National Credit Guarantee Trustee Company (NCGTC) to banks, NBFCs and Financial Institutions (FIs).

• Eligible MSMEs had to have an annual turnover up to ₹100 crore, with outstanding loans of up to ₹25 crore as on February 29, 2020. The scheme has been expanded to cover enterprises with a turnover up to ₹250 crore, with outstanding loans up to ₹50 crore.

• Scheme is valid for existing customers of a bank, NBFC or FI.

**‘Sahakar Cooptube Channel**

• Union Minister of Agriculture & Farmers’ Welfare launched the National Cooperative Development Corporation's YouTube channel, 'Sahakar Cooptube NCDC India', to encourage farmers and the youth to take benefit of cooperatives.
• The guidance videos in different languages covering 18 states would also strengthen and deepen the major initiatives of our government to promote and form 10,000 farmer-producer organisations (FPOs).

Andaman And Nicobar To Be Maritime And Startup Hub

• Prime Minister recently said that the Andaman and Nicobar islands region, owing to its strategic importance, was going to be developed as a “maritime and startup hub”.
• 12 islands of the archipelago have been selected for high-impact projects with an emphasis on boosting trade of sea-based, organic and coconut-based products of the region.
• The proposed transhipment hub in the Andamans will help the group of islands become an important centre of blue economy and a maritime and startup hub.

Samadhan-se-vikas Scheme

• The scheme is launched by the Haryana Government and modelled on the Central Government’s Vivad se Vishwas scheme of the Ministry of Finance.
• It aims for the recovery of long-pending dues on account of External Development Charges (EDC) and Infrastructural Development Charges (IDC).

Related Concepts

• Infrastructure Development Charges (IDC): These charges are paid by the real estate developers to the state government for development of major infrastructure projects like construction of transportation networks including highways, bridges etc.
• External Development Charges: These charges are paid by the real estate developer to civic authorities for maintenance of civic amenities within the periphery of the developed project.
• Vivad se Vishwas Scheme: It is a direct tax dispute resolution scheme of the Central government which aims for reducing income tax pending litigation, and help taxpayers end their tax disputes with the department by paying disputed tax and get waiver from payment of interest and penalty.

Development Of An Economic Corridor — The Satellite Town Ring Road (STRR) — Between Tamil Nadu And Karnataka

• The greenfield highway is part of Bharatmala Pariyojna and will be implemented by the National Highways Authority of India.
• Development of the proposed project road will boost the local agriculture and enable farmers to realise better value for their products as well as attract more investment to that region.

India Water Resources Information System (India-WRIS)

• It has been launched by the Ministry of Jal Shakti (MoJS) under the National Hydrology Project in 2019.
• It is a web portal that contains information related to Water Resources for rainfall, water levels & discharge of rivers, water bodies, ground water levels, reservoir storages, evapotranspiration and soil moisture among others.
Krishi Megh

- The Agriculture Ministry has launched a data recovery centre 'Krishi Megh' set up in Hyderabad.

- Krishi Megh has been set up under the National Agricultural Higher Education Project (NAHEP), funded by both the government and World Bank.

- It aims to protect the precious data of the government's premier research body the Indian Council of Agricultural Research (ICAR)

- Currently, the main data centre of the Indian Council of Agricultural Research (ICAR) is at the Indian Agricultural Statistics Research Institute (IASRI) in the national capital.

- The data recovery centre has been set up at National Academy of Agricultural Research Management (NAARM), Hyderabad.
WHO Foundation

- World Health Organization announced the creation of a foundation that will support the organization's efforts to address the most pressing global health challenges by raising new funding from "non-traditional sources".
- Headquartered in Geneva and legally independent from the WHO.
- **Function**: It will facilitate contributions from the general public, individual major donors and corporate partners to WHO and trusted partners to deliver on high-impact programmes.
- Foundation will support global public health needs by providing funds to WHO and trusted implementing partners to deliver on the Organization's “triple billion” goals. These goals aim to:
  - Protect 1 billion people from health emergencies;
  - Extend universal health coverage to 1 billion people;
  - Assure healthy lives and wellbeing to 1 billion people by 2023.

European Court of Justice

- Germany's constitutional court questioned the legality of a past ruling of the European Court of Justice.
- **Background**: In 2018, the ECJ had ruled that a EUR 2 trillion bond-buying scheme of the European Central Bank (ECB) was legal as per EU law. Recently, the constitutional court of Germany ruled that the ECJ’s 2018 ruling was “ultra vires”.
- **The European Court of Justice** (ECJ), a supranational institution, is a part Court of Justice of the European Union (CJEU), and is the European Union's supreme court in matters of EU law.
- **Founded in 1952 after the Treaty of Paris, the Luxembourg-based court** ensures that EU law is interpreted and applied the same in every EU country, and ensures that countries and EU institutions abide by EU law. It settles legal disputes between national governments and EU institutions.
- In terms of hierarchy, the national courts of member countries are understood to be below the ECJ in matters of EU law.

Toman

- Iran's parliament has passed a bill under which Iran's national currency will be changed from the rial to the Toman, which is equal to 10,000 rials.
- The Guardian Council, a body of conservative clerics that supervises Parliament, is expected to ratify the law, and then the Central Bank will have two years to implement the change — removing rials from circulation and issuing tomans instead.
- The bill allows the government to slash four zeros from the rial. The idea of removing four zeros has been floated since 2008, but gained strength after 2018, when U.S. President Donald Trump exited Iran's 2015 nuclear deal and reimposed sanctions, as the rial lost more than 60% of its value.
Hezbollah

- **Germany banned the Lebanese militant group Hezbollah** from carrying out any activity on its soil and declared the group a terrorist organization.

- **Hezbollah - the Party of God** - is a **Shia Islamist, political party and militant group** that first emerged with the help of Iran during Lebanon’s civil war as a militia after the Israeli invasion of that country in 1982.

- After Israel withdrew in 2000, Hezbollah resisted pressure to disarm and continued to strengthen its military wing, the **Islamic Resistance**. The group also gradually became a key power broker in Lebanon's political system, and has effectively gained veto power in the cabinet.

- Hezbollah has been accused of carrying out a string of bombings and plots against Jewish and Israeli targets and is **designated a terrorist organisation by United States, Canada, the United Kingdom, Western states, Israel, Gulf Arab countries and the Arab League**. European Union had previously classed Hezbollah’s military wing as a terrorist group.

**Virtual NAM Summit**

- Prime Minister Narendra Modi participated in a virtual summit of the Non-Aligned Movement (NAM) Contact Group under the chairmanship of President of Azerbaijan Ilham Aliyev.

- This was the **first time Prime Minister had participated in NAM meeting since the beginning of his tenure in 2014**. Between 2014 and 2020, two NAM summits were held, in 2016 (Venezuela) and 2019 (Azerbaijan) respectively. At both these summits, India was represented by its vice president.

**Non-Aligned Movement (NAM)**

- NAM represents the **biggest grouping of countries outside the United Nations**, comprising 120 developing countries from Asia, Africa, and Latin America.

- The NAM was formed during the Cold War, largely on the initiative of then-Yugoslav President Josip Broz Tito, as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.

- The basic concept for the group originated in 1955 during discussions that took place at the **Asia-Africa Bandung Conference** held in Indonesia and **the first NAM Summit Conference took place in Belgrade**, Yugoslavia, in September 1961.

- **NAM does not have a formal constitution or permanent secretariat**, and its administration is non-hierarchical and rotational. Decisions are made by consensus, which requires substantial agreement, but not unanimity.

**Permanent Missions To United Nations (UN)**

- India has appointed diplomat T S Tirumurti, currently serving as Secretary in the Ministry of External Affairs, as its Permanent Representative to the United Nations.

- **Permanent Missions to the UN**: The Permanent Mission is the diplomatic mission that every member state deputes to the United Nations, and is headed by a Permanent Representative, who is also referred to as the “**UN ambassador**”.

- UN Permanent Representatives are assigned to the **UN headquarters in New York City**, and can also be appointed to other UN offices in Geneva, Vienna, and Nairobi.
- There are currently eight Indians in senior leadership positions at the United Nations at the levels of Under Secretary General and Assistant Secretary General.

**Lost at Home’ Report**

- The ‘Lost at Home’ report, published by UN Children’s Fund (UNICEF), said that almost 33 million new displacements were recorded in 2019 — around 25 million were due to natural disasters and 8.5 million as consequence of conflict and violence.
- More than 5 million people were internally displaced in India due to natural disasters, conflict and violence in 2019, constituting the highest number of new internal displacements in the world during the period followed by the Philippines, Bangladesh and China.
- The report said that natural disasters resulted in more new displacements than conflict and violence.
- The largest number of internally displaced children due to conflict are found in the Middle East and North Africa (MENA) and sub-Saharan Africa.

**Operation Samudra Setu**

- Indian Navy has launched Operation Samudra Setu - meaning Sea Bridge, as a part of national effort to repatriate Indian citizens from overseas amid coronavirus pandemic.
- The evacuated personnel will be disembarked at Kochi, Kerala and entrusted to the care of State authorities.
- This operation is being progressed in close coordination with Ministries of Defence, External Affairs, Home Affairs, Health and various other agencies of the Government of India and State governments.

**Open Skies Treaty**

- The United States said that it would withdraw from the Open Skies treaty (OST) citing repeated Russian violations of its terms.
- Open Skies treaty was first proposed in 1955 by former US President Dwight Eisenhower as a means to deescalate tensions during the Cold War, it was eventually signed in 1992 between NATO members and former Warsaw Pact countries following the demise of the Soviet Union.
- **Aim:** Building confidence among members through mutual openness, thus reducing the chances of accidental war.
- It came into force on January 1, 2002 and currently has 35 signatories along with one non-ratifying member (Kyrgyzstan). India is not a member of this treaty.
- **Terms of Treaty:**
  - Under the treaty, a member state can “spy” on any part of the host nation, with the latter’s consent. A country can undertake aerial imaging over the host state after giving notice 72 hours before, and sharing its exact flight path 24 hours before.
  - The information gathered, such as on troop movements, military exercises and missile deployments, has to be shared with all member states. Only approved imaging equipment is permitted on the surveillance flights, and officials from the host state can also stay on board throughout the planned journey.
Significance of the treaty: It was signed much before the advent of advanced satellite imaging technology which is currently the preferred mode for intelligence gathering. Surveillance aircraft provide key information that still cannot be gathered by satellite sensors, such as thermal imaging data.

Travel Bubble
- The Baltic countries of Estonia, Latvia, and Lithuania have started what is being referred to as a ‘travel bubble’ to help put their economies back on track post-Covid lockdowns.
- Creating a travel bubble involves reconnecting countries or states that have shown a good level of success in containing the novel coronavirus pandemic domestically. Such a bubble would allow the members of the group to rekindle trade ties with each other, and kickstart sectors such as travel and tourism.
- Potential travel bubbles among better-performing countries around the world would account for around 35 per cent of the global GDP. Such arrangements are especially being favoured by smaller countries, who are likely to benefit after being able to trade again with larger partners.
- In the Estonia-Latvia-Lithuania travel bubble, residents would be able to travel freely by rail, air, and sea without quarantine measures.

Mission SAGAR
- India launched Mission Sagar as part of the government's outreach initiative towards five Island nations in the Indian Ocean amidst the ongoing COVID-19 pandemic.
- As part of Mission, Indian Naval Ship Kesari has departed for five Island Nations - Maldives, Mauritius, Seychelles, Madagascar and Comoros. India will provide food items, COVID related Medicines including HCQ Tablets and Special Ayurvedic Medicines with Medical Assistance Teams to these nations.
- The deployment is in consonance with the Prime Ministers' vision of Security and Growth for All in the Region ‘SAGAR’ promulgated in March 2015.

United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)
- India has contributed US$ 2 million to the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA).
- With this year’s contribution, India opened the way to become a member of the Agency's Advisory Commission.
- UNRWA is a subsidiary agency created by the UN in 1949 to provide relief, health, and education services for Palestinians. The UNRWA definition of “refugee” covers Palestinian who fled or were expelled from their homes during the 1948 Palestine War.
- UNRWA is the only UN agency dedicated to helping refugees from a specific region or conflict and is separate from UNHCR.
UNRWA's members are Belgium, Egypt, France, Japan, Jordan, Lebanon, Syria, Turkey, the United Kingdom, and the United States; the Palestine Liberation Organization (PLO) has observer status.

Conference On Interaction And Confidence-Building Measures In Asia (CICA)

- External Affairs Minister, S. Jaishankar attended the 5th CICA Summit in Dushanbe, Tajikistan.
- **Theme of the 5th Summit (2019):** Shared Vision for a Secure and More Prosperous CICA Region.
- CICA is a multi-national forum established in 1999 for **enhancing cooperation towards promoting peace, security and stability in Asia.**
- **Secretariat:** Nur-Sultan, Kazakhstan.
- **Membership:** For becoming a member of CICA, a state must have at least a part of its territory in Asia. Presently CICA has 27 member states. **India is a member of CICA since its inception.**
- **Meeting:** The highest decision-making organ of CICA is the meeting of the CICA heads of state and government. The CICA summit is convened **every four years.** Meeting of the Ministers Of Foreign Affairs is required to be held **every two years.**

G20 Virtual Trade and Investment Ministers Meet

- Union Commerce and Industry Minister participated during the second G20 Virtual Trade and Investment Ministers Meeting.
- The meeting was called to discuss ways to minimize disruption to trade and global supply chains caused by COVID-19 pandemic. It was **hosted by the current chair of G20 grouping, Saudi Arabia.**
- G-20, is a **Group Of Finance Ministers And Central Bank Governors** from 19 **individual countries** and **European Union.** It is a forum, **not a legislative body**, its agreements and decisions have **no legal impact**, but they do influence countries' policies and global cooperation.
- Established in 1999, G20 was elevated from a forum of Finance Ministers and Central Bank Governors to that of **Heads of State/Government** in 2008 to effectively respond to the **global financial crisis of 2008.**
- **Members** - Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, **Russia**, Saudi Arabia, South Africa, Turkey, United Kingdom, United States and the European Union.

International Telecommunication Union (ITU)

- World Telecommunication Day has been celebrated annually on 17 May since 1969, marking the founding of ITU and the signing of the first International Telegraph Convention in 1865.
- Founded in 1865, ITU is the **United Nations specialized agency** for information and communication technologies.
- **HQ** – Geneva, Switzerland.
- **Functions:** It facilitate international connectivity in communications networks, **allocate global radio spectrum and satellite orbits, develop the technical standards** that ensure networks and technologies seamlessly interconnect.
• The ITU was one of the UN agencies responsible for convening the World Summit on the Information Society (WSIS), along with UNESCO, UNCTAD and UNDP.

**Special 301 Report**

• The United States Trade Representative (USTR) has published its Annual Special 301 Report. It identifies trading partners that do not adequately or effectively protect and enforce intellectual property (IP) rights or otherwise deny market access to U.S. innovators and creators that rely on protection of their IP rights.

• Trading partners that currently present the most significant concerns regarding IP rights are placed on the Priority Watch List or Watch List. USTR identified 36 countries for these lists in the Special 301 Report.

• India continues to be on the ‘Priority Watch List’ for lack of adequate IP rights protection and enforcement. While India made “meaningful progress” to enhance IP protection and enforcement in some areas over the past year, it did not resolve recent and long-standing challenges such as:
  - Innovators being able to receive, maintain and enforce patents particularly in the pharmaceutical sector;
  - Concerns over copyright laws not incentivising the creation and commercialisation of content;
  - Outdated trade secrets framework.

• The report urged India to join the Singapore Treaty on the Law of Trademarks, a treaty that harmonises trademark registration.

**Global Terrorism Index (GTI) 2019**

• A report compiled by NITI Aayog has questioned the methodology adopted by GTI 2019 to rank India as the seventh worst terrorism affected country ahead of conflict-ridden countries such as the Democratic Republic of Congo, South Sudan, Sudan, Burkina Faso, Palestine and Lebanon.

• Report stated that the GTD was based solely on “unclassified media articles, with more than 100 structured variables such as each attack’s location, tactics and weapons, perpetrators, casualties and consequences etc. It also questions the opaque funding of the Institute for Economics and Peace (IEP).

Why GTI Score Is Important For India

• GTI scores are directly used in the Global Peace Index, published by the IEP, the Global Slavery Report published by the Walk Free Foundation, and indirectly used in computing country scores in the World Economic Forum’s Travel and Tourism Competitiveness and Global Competitiveness Indices. The GTD is also used in computation of the Safe Cities Index by the Economist Intelligence Unit.

• Positioning in the global indices impacted investments and other opportunities.

About Global Terrorism Index (GTI)

• GTI is a report published annually by the Institute for Economics and Peace (IEP), a global think tank headquartered in Sydney, Australia.

• The index provides a comprehensive summary of the key global trends and patterns in terrorism since 2000. It produces a composite score in order to provide an ordinal ranking of countries on the impact of terrorism.
• It uses **four parameters** to calculate each country’s annual score
  - Total number of terrorist incidents.
  - Fatalities caused by terrorists
  - Injuries caused by terrorists
  - Total property damage from terrorist incidents in a given year.

• GTI report is based primarily on the **Global Terrorism Database (GTD)** collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, apart from other sources.

**Exercise ‘Pitch Black’**

- Australia has informed India that their premier multilateral air combat training exercise Pitch Black 2020 has been cancelled due to the COVID-19 situation. The next edition of Pitch Black is scheduled in 2022.
- Exercise Pitch Black is a **biennial multi-national air warfare exercise conducted by Australia**.
- Main objective of this exercise is to practice Offensive Counter Air and Defensive Counter Air combat in a simulated war environment.
- The first exercise took place in 1981. India for the first time participated in this exercise in 2018.

**Spratly and Paracel Islands Disputes**

Recently, China unilaterally renamed 80 islands and other geographical features around the **Spratly and Paracel Islands (in South China Sea)**, drawing criticism from neighboring countries.

**Spratly Islands dispute**

- There has been an ongoing territorial dispute between **China, Taiwan, Vietnam, the Philippines, and Malaysia** concerning the ownership of the Spratly Islands archipelago and nearby geographical features like corals reefs, cays etc. in the South China Sea.
- Since 1968, these nations have engaged in varying kinds of **military occupation of the islands and the surrounding waters**, with the exception of Brunei, that has contained its objections to the use of its maritime waters for commercial fishing.
- Although the Spratly Islands are largely uninhabited, there is a possibility that they may have **large reserves of untapped natural resources** including Oil.

**Paracel Islands dispute**

- The Paracel Islands archipelago is a collection of 130 islands and coral reefs and **is located in the South China Sea, almost equidistant from China and Vietnam**.
- Beijing says that references to the Paracel Islands as a part of China sovereign territory can be found in 14th century writings from the Song Dynasty. Vietnam on the other hand, says that historical texts from at least the 15th century show that the islands were a part of its territory.
Since 2012, China, Taiwan and Vietnam have attempted to reinforce their claims on the territory by engaging in construction of government administrative buildings, tourism, land reclamation initiatives and by establishing and expanding military presence on the archipelago.

**World Health Organization (WHO)**

- President Donald Trump has formally moved to withdraw the US from the World Health Organization. US has been a party to WHO Constitution since June 1948. The Trump administration has formally notified the United Nations in this regard.
- **Why US Decided To Pull Out:** As per US, China has total control over WHO. It also accused the WHO of siding with China on the outbreak of the virus, which originated in the Chinese city of Wuhan. WHO has failed to initiate reforms which is need of the hour. In April 2020, US stopped funding to WHO and later it announced that US was terminating its relationship with WHO.
- The US is the single largest contributor to the WHO, providing over USD 450 million per annum. China’s contribution to the global health body is about USD 40 million.

**About WHO**

- WHO is a specialized agency of the United Nations responsible for international public health. It was established On 7 April 1948, which is commemorated as World Health Day.
- It is headquartered in Geneva, Switzerland.
- **World Health Assembly (WHA)** composed of representatives from all 194 member states, serves as the agency’s supreme decision-making body. The main functions of the Assembly, are to determine WHO policies, appoint the Director-General, approve the programme budget etc.
- Its flagship publication, the World Health Report, provides expert assessments of global health topics and health statistics on all nations.
- **Funding:** Voluntary donations from member states (such as the US) contribute 35.41%, assessed contributions are 15.66%, philanthropic organisations account for 9.33%, UN organisations contribute about 8.1%; the rest comes from myriad sources. The US contributes almost 15% of the WHO’s total funding and almost 31% of the member states’ donations, the largest chunk in both cases. India contributes 1% of member states’ donations.
- India became a party to the WHO Constitution on January, 1948.

**INDO-U.S. Missile Deals**

- The U.S. State Department has approved two potential missile deals with India, for an estimated $92 million and $63 million.
- The first deal is for 10 AGM-84L Harpoon Block II air launched missiles, which can be fitted onto Boeing’s 8-PI (Poseidon Eight India) maritime patrol aircraft and are intended to enhance India’s capability in anti-surface warfare while defending its sea lanes.
- The second deal is for 16 MK 54 All Up Round Lightweight Torpedoes (LWT) and are expected to enhance India’s antisubmarine warfare capability and can be used with the P-8I.
USCIRF Annual Report 2020

- The U.S. Commission on International Religious Freedom (USCIRF) has downgraded India to the lowest ranking, “countries of particular concern” (CPC) in its 2020 report.
- This is the first time since 2004 that India has been placed in this category. India is placed alongside countries, including China, North Korea, Saudi Arabia and Pakistan.
- Certain steps taken by the government and associated violence with regard to the Citizenship (Amendment) Act and the National Register of Citizens, Cow Slaughter Laws, Anti-Conversion Laws, situation in Jammu and Kashmir etc has forced USCIRF to downgrade India’s position.
- It also urged US to take stringent action against India under the “International Religious Freedom Act” (IRFA).

USCIRF is an independent, bipartisan U.S. federal government commission, dedicated to defending the universal right to freedom of religion or belief abroad. It is an advisory or a consultative body, which advises the US Congress.

Japan Renames Area Containing Senkaku Islands

- The Ishigaki Municipal Assembly (A local council in southern Japan) has passed a bill to change the name of an administrative area covering the disputed uninhabited island chain to Tonoshiro Senkaku from Tonoshiro.
- The Senkakus island chain, which China calls Diaoyus, has been administered by Japan since 1972, but its legal status has remained disputed until now.
- The Senkaku Islands are located in the East China Sea. The sovereignty on this island is claimed by Japan, the People’s Republic of China, and the Republic of China (Taiwan).

Arrest Warrant for US President Trump

- Iran has issued an arrest warrant and asked Interpol for help in detaining US President Donald Trump and dozens of others it believes carried out the drone strike that killed Qasem Soleimani, a top Iranian general in Baghdad.
- Iran asked Interpol to issue a Red Notice for this purpose. However, the constitution of Interpole prohibits it to undertake any intervention or activities of a political, military, religious or racial character.
- Interpol or International Criminal Police Organization, HEADQUARTERED IN Lyon, France, is an inter-governmental organization of 194 member countries that help police in all of them to work together to make the world a safer place.
- Red Notice Request: Under a red notice, local authorities make the arrests on behalf of the country that requested it. The notices cannot force countries to arrest or extradite suspects, but can put government leaders on the spot and limit suspects’ travel.
• While the organization is responsible for coordinating international policing efforts, it does not have the authority to make arrests.

**Statehood Bill for Washington D.C**
• The lower house of the United States Congress, the House of Representatives, has voted in favour of the Bill that would grant the United States’ capital Washington D.C statehood. The legislation is to make D.C. (stands for District of Columbia) the 51st U.S. state.
• Washington D.C, in 1790, was carved out from the states of Virginia and Maryland.
• The Bill would establish a federal district comprising the Capitol and White House, the National Mall and other major federal buildings. The rest of the District would become a state called Washington, Douglass Commonwealth, named for the Black abolitionist and intellectual Frederick Douglass.

**Constitution of Nepal (Second Amendment) Bill 2077**
• Nepal's Lower House has unanimously passed the Constitution of Nepal (Second Amendment) Bill 2077 (Vikram era).
• The bill contains proposal to a new map of the country that includes Indian areas of Kalapani, Limpiyadhura and Lipulekh.
• India has stated that the artificial enlargement of claims is not based on historical fact or evidence and is not tenable.
• It is also violative of current understanding to hold talks on outstanding boundary issues.

**Shwe Project In Myanmar**
• ONGC Videsh Ltd (OVL) will be investing an additional $121.27 million towards further development of Shwe oil & gas project in Myanmar.
• OVL has been associated with exploration and development of Shwe gas project in Myanmar since 2002. The first gas from Shwe Project was received in July 2013 and plateau production was reached in December 2014.

**Uyghur Human Rights Policy Act of 2020**
• The Act require various United States government bodies to report on the treatment of Uyghurs in Xinjiang, China, including internment in the Xinjiang re-education camps.
• It calls for sanctions against those responsible for repression of Uyghurs and other Muslim groups in China’s Xinjiang province, where the United Nations estimates that more than a million Muslims have been detained in camps.
• The Bill also calls on U.S. firms operating in Xinjiang region to ensure their products do not include parts using forced labour.
• It represents the most significant action to date by any country to punish China.

**China Passes Hong Kong Security Law**
• China has formally adopted a controversial security law, giving it new powers over Hong Kong.
• It is set to criminalize secession, subversion and collusion with foreign forces, but will also effectively curtail protests and freedom of speech.
• The new security law has been added to Hong Kong’s Basic Law, the 50-year mini-constitution agreed when the territory’s sovereignty was returned to China by the UK in 1997.
• Its terms are not yet clear. I.e. residents still do not know the measures they will have to abide by.

Pakistan-Afghanistan Transit Trade Agreement (APTTA)
• Pakistan will allow Afghanistan to send goods to India using the Wagah border from July 15. The decision is a part of Islamabad’s commitment under APTTA.
• APTTA is a bilateral trade agreement signed in 2010 by Pakistan and Afghanistan that calls for greater facilitation in the movement of goods amongst the two countries.
• The 2010 APTTA allows for both countries to use each other’s airports, railways, roads, and ports for transit trade along designated transit corridors.
• The 2010 agreement supersedes the 1965 Afghanistan Transit Trade Agreement, which granted Afghanistan the right to import duty-free goods through Pakistani seaports.

Chabahar Project
• Iran drops India from Chabahar rail project citing delays from the Indian side in funding and starting the project. The development comes as China finalizes a massive 25-year, $400 billion strategic partnership deal with Iran, which could cloud India’s plans.
• The railway project to construct a rail line from Chabahar port to Zahedan, was being discussed between the Iranian Railways and the Indian Railways Construction Ltd (IRCON), was meant to be part of India’s commitment to the trilateral agreement between India, Iran and Afghanistan to build an alternate trade route to Afghanistan and Central Asia.
• The project not only gives India an alternative route to Afghanistan, bypassing Pakistan, but also has the potential to provide an Indian strategic counter to Pakistan’s Gwadar port being developed by China right next door to Chabahar.
• The Chabahar Port is located on the Gulf of Oman. It is the only oceanic port of Iran.

India’s Top Trading Partner
• The US remained India’s top trading partner for the second consecutive fiscal in 2019-20, which shows increasing economic ties between the two countries.
• According to the data of the commerce ministry, in 2019-20, the bilateral trade between the US and India stood at $88.75 billion as against $87.96 billion in 2018-19. The US is one of the few countries with which India has a trade surplus.
• China was India’s top trading partner since 2013-14 till 2017-18. In 2018-19, the US first surpassed China to become India’s top trading partner. Before China, UAE was the country’s largest trading nation.

Visiting Forces Agreement (VFA)
• The government of the Philippines has suspended its plan to abrogate the bilateral Visiting Forces Agreement with the United States.
• Visiting Forces Agreement (VFA) allows the entry of large numbers of American forces for joint combat training with Filipino troops and lays down the legal terms for their temporary stay. It VFA plays a fundamental role in normal military activities within the confines of the alliance.

• Also, without a VFA, the implementation of the 2014 Enhanced Defense Cooperation Act, or EDCA, would be impossible.

Kohala Hydropower Project

• China will set up a 1,124-megawatt Kohala Hydropower project in Pakistan-occupied Kashmir. This project will be executed under the China-Pakistan Economic Corridor (CPEC) framework.

• The project will be built on the Jhelum River and aims at annually providing more than five billion units of clean and low-cost electricity for consumers in Pakistan.

• India has opposed this project on the grounds that the entire territory of the Union Territories of Jammu and Kashmir and Ladakh are integral and inalienable parts of India.

India Clears ‘RELOS’ Deal with Russia

• The Indian government has cleared the signing of ‘RELOS' (Reciprocal Exchange Of Logistics) agreement with Russia. This means Indian ships or aircraft can now use Russian ports or airfields without having to take permission or make immediate payments.

• So far, India has signed four military logistics support agreements with partner countries:
  o Logistics Exchange Memorandum of Agreement (LEMOA) with the United States in 2016.
  o Implementing Arrangement Concerning Mutual Coordination, Logistics and Services Support with Singapore in 2018.
  o Agreement for the Provision of Reciprocal Logistics Support between the Armed Forces with France in 2018.
  o Agreement to Extend Logistical Support to each other’s navies with Republic of Korea in 2019.

India Elected to UNSC’s Non-Permanent Member Seat

• India has been elected to the UN Security Council (UNSC) as non-permanent member with 184 of the 192 votes. It has been elected for a two-year term starting January 1, 2021.

• Along with India, Ireland, Mexico and Norway obtained the requisite two-thirds majority in the General Assembly. The fifth African seat remained vacant and will go into second round with Kenya and Djibouti fighting it out.

• The UNSC has five permanent members – China, France, Russia, the United Kingdom, and the United States. Ten non-permanent members are elected by the General Assembly for a term of two years. To get elected, a country has to secure 2/3rd of the votes casted.

• India was the endorsed candidate of the Asia-Pacific Group of UN member countries and faced no competition. The last time India was elected to the UNSC was in 2010 (tenure started from 2011).

China To Join UN Arms Trade Treaty

• The People’s Republic of China has decided to join the UN Arms Trade Treaty. The treaty is a global pact to regulate arms sales in the world.
The UN General Assembly adopted Arms Trade Treaty in 2013 and entered into force on December 2014. This is the first-ever global treaty to establish international norms aiming to prevent conventional weapons from being used for war crimes and human rights abuses, or being diverted for illegal use by criminals.

The world's largest arms traders including the United States, China and Russia have not joined the treaty. Now China has decided to join the treaty.

India is not a member of this treaty.

Open Sky Agreement

Recently UAE showed interest to have an open sky agreement with India.

There are about 1,068 flights a week between India and the UAE operated by the airlines of the two countries under the bilateral Air Service Agreement.

The National Civil Aviation Policy, 2016, allows the government to enter into an 'open sky' air services agreement on a reciprocal basis with SAARC nations as well as countries beyond a 5,000 kilometre radius from New Delhi. UAE wants India to revisit this policy.

Open Sky Agreement allow airlines to operate unlimited number of flights between the two countries. India has already signed open sky agreements with Japan, US, Greece, Jamaica, Guyana, Czech Republic, Finland, Spain and Sri Lanka.

Expat Quota Bill

Kuwait’s National Assembly has approved the draft expat quota bill, according to which Indians should not exceed 15% of the population.

Of the 4.3 million population of Kuwait, expats account for 3 million. The Indian community constitutes the largest expat community in Kuwait, totaling 1.45 million.

Kuwait is a top source of remittances for India. In 2018, India received nearly USD 4.8 billion from Kuwait as remittances.

Natanz Nuclear Facility

A fire at Iran’s underground Natanz nuclear facility has caused significant damage that could slow the development of advanced centrifuges used to enrich uranium.

Natanz, also known as the Pilot Fuel Enrichment Plant, is among the sites now monitored by the International Atomic Energy Agency after Iran’s 2015 nuclear deal with world powers.

Natanz includes underground facilities buried under 7.6 meters of concrete, which offers protection from airstrikes.

About IAEA

Widely known as the world’s “Atoms for Peace and Development” organization within the United Nations family, the IAEA is the international centre for cooperation in the nuclear field.

Headquartered at Vienna, IAEA was established as an autonomous organisation on 29 July 1957.

Though established independently of the United Nations through its own international treaty, the IAEA Statute, the IAEA reports to both the United Nations General Assembly and Security Council.
Naval Liaison Officers at Madagascar and Abu Dhabi

- India is planning to post Navy Liaison Officers at the Regional Maritime Information Fusion Centre (RMIFC) in Madagascar and also at the European Maritime Awareness in the Strait of Hormuz (EMASOH) in Abu Dhabi.

- **RMIFC**: Based in Madagascar, it functions under the aegis of the Indian Ocean Commission. It aims to deepen maritime domain awareness by monitoring maritime activities and promoting information sharing and exchange.

- **EMASOH**: Started by France in February 2020, it is based at the French naval base in Abu Dhabi. It aims to monitor maritime activity and guarantee freedom of navigation in the Persian Gulf and the Strait of Hormuz.

- **Indian Ocean Commission**: It is particularly unique and is the only African regional organisation composed entirely of islands: Comoros, France/Reunion, Madagascar, Mauritius and Seychelles. India had joined the Indian Ocean Commission (IOC) as an observer in March 2020.

H-1B Visa Programme

- The US has blocked H1-B and certain other non-immigrant worker visas until the end of the year.

- H-1B visa is an employment-based, non-immigrant visa category for temporary workers. It was launched in 1990 to help American firms deal with labor shortages in rapidly growing fields that demand specialized skills.

- Apart from the H-1B visas, the US government also issues L1 visas which allows companies to transfer highly skilled workers to US for a period of up to seven years. H-2B visas allow food and agricultural workers to seek employment in the US.

Kholongchhu Hydro Electric Project

- India and Bhutan have signed a pact for the construction of the 600 MW Kholongchhu project.

- It will be the first joint venture hydroelectric project in Bhutan that is to be completed in five years (by 2025).

- It is a joint venture between Bhutan’s Druk Green Power Corporation (DGPC) and India’s Satluj Jal Vidyut Nigam Limited (SJVNL).

- The 600 MW run-of-the-river project is located on the lower course of the Kholongchhu River in Trashiyangtse district in eastern Bhutan.

Malathion 95% ULV Insecticides to Iran

- State-owned insecticide manufacturer HIL (India) Ltd has supplied about 25 tonnes of Malathion 95 per cent ULV to Iran to help the country control the locust menace.

- Malathion is a chemical mainly used to protect food-producing plants from insects. It has been supplied to Iran on government-to-government basis.

- India had recently approached Iran and Pakistan for coordinated response to counter desert locust menace in the region.
**Victory Day Parade**

- Recently, Indian Defence Minister attended the Victory Day Parade in Moscow, Russia on the occasion of the **75th anniversary of the Soviet victory over Nazi Germany**.
- The Indian contingent participated in the parade along with the armed forces personnel from 17 other countries, including China.

**Mary Jackson**

- NASA decided to name its headquarters in Washington DC after its **first black female engineer**, **Mary Jackson**. Jackson had helped to break down barriers for African Americans and women in engineering and technology.
- Mary Jackson was recruited in 1951 by the **National Advisory Committee for Aeronautics which was succeeded by Nasa in 1958**. Jackson died in 2005 and in 2019 she was posthumously awarded the Congressional Gold Medal.

**Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG)**

- India attended the virtual 32nd special Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG) plenary meeting.
- EAG is a FATF-style regional body established in 2004, which comprises **9 countries**: Belarus, China, Kazakhstan, Kyrgyzstan, India, Russia, Tajikistan, Turkmenistan and Uzbekistan.
- EAG is an **associate member of the Financial Action Task Force (FATF)**.
- Observer status has been granted to 15 countries and 23 international organizations.

**Israel-UAE Peace Deal**

- US President Donald Trump announced that the **United Arab Emirates and Israel have agreed to establish full diplomatic ties** as part of a deal to halt the annexation of occupied land sought by the Palestinians for their future state.
- With this announcement, the UAE became the first Gulf Arab state to do so and only the third Arab nation to have active diplomatic ties with Israel. **Under the deal, Israel would suspend its plans to annex large parts of the occupied West Bank.**
- Among Arab nations, **only Egypt and Jordan have active diplomatic ties with Israel**. Mauritania recognized Israel in 1999, but later ended relations in 2009 over the Israel's war in Gaza.
- The UAE is a US-allied federation of seven sheikhdoms on the Arabian Peninsula. Formed in 1971, the country like other Arab nations at the time did not recognize Israel over its occupation of land home to the Palestinians.

**1947 Tripartite Agreement On Gurkha Soldiers**

- Nepal Foreign Minister recently said that the **1947 agreement among India, Nepal and the United Kingdom** that deals with the military service of Gorkha soldiers has become “redundant”.
- It was the first window open for Nepali youths to go abroad. The 1947 agreement **divided the Gorkha regiments of the British empire between India and the United Kingdom.**
• It also assured that the Gorkha soldiers of Nepal while serving in the British military will draw perks and privileges equivalent to their counterparts. However, Gorkha veterans have been alleging that the U.K. has been discriminating against them.

• Gorkha soldiers from Nepal have been an integral part of the Indian Army for over six decades and currently, there are 39 battalions serving in 7 Gorkha regiments. Indian Army Chief is granted the honorary post of a General in the Nepal Army.

• The objection from Nepal regarding the Gorkhas serving in the Indian military has been heard more prominently in the recent months in the backdrop of Nepal-India territorial dispute over the Kalapani region.

Operation Breathing Space
• A team of researchers from Israel arrived in Delhi with a mission, code-named Operation Breathing Space to work with Indian authorities in the fight against the pandemic.

• The delegation will carry out the final stages of research in India to determine the effectiveness of advanced Israeli technologies developed for the rapid diagnosis of COVID-19.

• The team is working on four different kinds of technologies that have the potential to detect COVID-19 in as less as 30 seconds.

U.K. To Issue Coin In Honour Of Mahatma Gandhi
• Britain is considering minting a coin to commemorate Mahatma Gandhi, amid growing interest in recognising the contributions of people from the Black, Asian and other minority ethnic communities.

• Gandhiji’s birthday, October 2, is observed as the International Day of Non-Violence.

Pakistan’s New Map
• The Ministry of External Affairs has termed Pakistan’s announcement of a new political map, which asserts its claims on Jammu and Kashmir, Siachen, Sir Creek, and Junagadh, as an exercise in “political absurdity”.

• The new map depicts the entirety of Jammu and Kashmir as a disputed territory while also incorporating Siachen as part of Pakistan. It does not show any borders in the east of Kashmir, where China illegally occupied Aksai Chin. It also incorporates Sir Creek into Pakistani territory as well as parts of the erstwhile princely state of Junagadh. The map also shows the Federally Administered Tribal Areas as being part of Khyber Pakhtunkhwa province.

• This is not the first time Pakistan has tried to portray Junagadh as part of its territory. The 2012 Atlas of Islamic Republic of Pakistan also portrayed Junagadh as a separate territory.

• The Pakistan cabinet also approved the decision to rename a major road in Islamabad as Srinagar Highway. The road was previously called Kashmir Highway.

Constitutional Amendments in Russia
In a recently held referendum, Russian citizens supported a set of constitutional amendments. It was put to vote on 1 July, 2020.
Key Changes

- **Presidential Term**: Current Constitution allows for two consecutive terms as president. The new constitution does not change the two-term limit. However, it hits the reset button. In other words, with the enactment of new constitution, Putin will be eligible for two additional six-year terms after the current term expires in 2024. As a result, Putin can stay in power until 2036.

- **Stronger-man Presidentialism**: Recent amendments cement further centralisation of power. They give the President new powers, including the authority to remove judges, appoint some members of the parliament for life and name regional prosecutors.

- **Constitutional Patriotism**:
  - It gives the Russian Constitutional Court constitutional power to nullify the decisions of international tribunals.
  - It also place strict limitations on Russians who hold foreign citizenship or residency from serving public office. These constitutional restrictions block any individual who has ever held foreign residency or citizenship from ever running for President.
  - The amendments also declare the importance of a belief in God. It has also termed Russia as the successor state to the Soviet Union.

**Bhutan Issues Demarches to China**

- Bhutan has issued a demarche to China over its attempt to declare a Bhutanese wildlife sanctuary as a disputed territory. The demarche was a follow-up to protests earlier against Beijing’s attempt to make a non-dispute into a quarrel.

- **Background**: At the 58th Global Environment Facility Council held recently, the Chinese member raised objections to the Sakteng Wildlife Sanctuary project and argued that it was in a disputed area between China and Bhutan. Sakteng lies in a zone of Bhutan that borders Arunachal Pradesh and China. At the meeting, Bhutan strongly objected to the references made by China against its sovereignty. The GEF Secretariat objected to the Chinese claim and made it clear that Sakteng was well within Bhutan.

- China claims that the boundary between China and Bhutan has never been delimited. There have been disputes over the eastern, central and western sectors for a long time.

- Thimphu has made it clear that Sakteng is Bhutan’s sovereign territory and that there is no dispute.

**China Tells USA to Close Consulate in Chengdu**

- China ordered the United States to close its consulate in Chengdu in an increasingly rancorous diplomatic conflict. The order followed the U.S. closure of the Chinese consulate in Houston.

- In recent days, Washington and Beijing have been fighting over a slew of issues ranging from trade to the Coronavirus pandemic and China’s policies on Hong Kong, Xinjiang and the South China Sea.

- Earlier, the Trump administration had ordered the Houston consulate closed within 72 hours. It alleged Chinese agents tried to steal data from facilities in Texas including the Texas A&M medical system.

- The United States has an embassy in Beijing and consulates in five other mainland cities — Shanghai, Guangzhou, Chengdu, Shenyang and Wuhan. It also has a consulate in Hong Kong, a Chinese territory.
China Halts Hong Kong Extradition Pacts With Canada, Australia, U.K.

• China announced the suspension of Hong Kong’s extradition treaties with Canada, Australia and Britain in a tit-for-tat move following similar decisions by those countries over a controversial new security law.

• The three countries had all suspended extradition treaties with Hong Kong. This was done after Beijing imposed a broad new security law that criminalises many forms of political dissent. China termed this as an interference in its internal affairs.

Turkey Approves Social Media Law

• Turkey’s parliament approved a law that gives authorities greater power to regulate social media.

• The law requires major social media companies such as Facebook and Twitter to keep representative offices in Turkey to deal with complaints against content on their platforms.

• If a social media company refuses to designate an official representative, the legislation mandates steep fines, advertising bans and bandwidth reductions. With a court ruling, bandwidth would be halved, and then cut further. Bandwidth reductions mean social media networks would be too slow to use.

• The legislation also requires social media providers to store user data in Turkey.

Britain Bans China’s Huawei From 5G

• The United Kingdom has banned Huawei from its 5G telecom network thereby reversing its earlier decision to allow the Chinese tech company a limited role in building the country’s super-fast wireless infrastructure.

• Operators such as BT and Vodafone have been given until 2027 to remove existing Huawei equipment from their 5G networks.

• In the lead up to this complete removal of all Huawei kit from UK networks, there will be a total ban on purchase of any new 5G kit after December 31, 2020.

Parcel Train to Bangladesh

• The Indian Railways has operated its first-ever special parcel train to Bangladesh. It transported dry chillies from Andhra Pradesh’s Guntur district to the neighbouring country.

• Earlier, the mode of transportation was road. However, due to lockdown, railways was pressed into service.

• It also helped in reducing the cost of transportation. Sending the chillies to the neighbouring country by road cost around ₹7,000 per tonne while the expense for carrying the same by goods trains has come out to be ₹4,608 per tonne.

India-Bhutan Open New Trade Route

• India and Bhutan have opened a new trade route between Jaigaon in West Bengal and Pasakha in Bhutan.

• An additional Land Customs station has been opened at Ahllay, Pasakha by GoI in this regard.
• It will boost bilateral trade and commerce and lead to decongestion of vehicular traffic along the Jaigaon-Phuentsholing route.

• **India is Bhutan's largest trading partner.** The bilateral trade stood at Rs 9,227 crore in 2018.

**Cotton Warehouse In Vietnam**

• The Cotton Corporation of India (CCI) is planning to set up its own warehouse in Vietnam with an **aim to increase exports to Vietnam.**

• CCI has surplus stocks of cotton ahead of the next harvest season and is trying to boost exports to Vietnam and Bangladesh.

• **Bangladesh and Vietnam have duty-free access to markets of US, Europe, and China.** This gives them competitive advantage over Indian Yarn and garment exporters who pay comparatively higher duties. Also, the Bangladesh and Vietnam have higher demand for Indian cotton.

**Loya Jirga**

• Afghanistan began a three-day ‘Loya Jirga’ to decide on freeing about **400 Taliban fighters convicted for “serious crimes”**.

• The Loya Jirga is a **highly respected traditional consultative body of Afghanistan.** It is the most powerful constitutional forum, in fact, the strong legacy of the modern state of Afghanistan derives from this forum.

• Despite a decade or more of democracy, and years of being a republic, Afghanistan still gives its tradition of Loya Jirgas the kind of respect that allows even an elected head of state to defer to it. Since at least 1709, Jirgas have brought together tribal elders to settle issues of national crises in Afghanistan.

**GCC Backs UN Arms Embargo on Iran**

• The **Gulf Cooperation Council** sent a letter to the U.N. Security Council backing an extension of an arms embargo that’s kept Iran from purchasing foreign-made weapons like fighter jets, tanks and warships.

• The GCC alleged Iran had “not ceased or desisted from armed interventions in neighboring countries, directly and through organizations and movements armed and trained by Iran.”

• **The U.N. banned Iran from buying major foreign weapon systems in 2010** amid tensions over its nuclear program. That blocked Iran from replacing its aging equipment, much of which had been purchased by the shah before the 1979 Islamic Revolution. An earlier embargo targeted Iranian arms exports.

*Gulf Cooperation Council (GCC) is a political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman. The GCC was established in Riyadh, Saudi Arabia, in May 1981.*

**New Supreme Court Building in Mauritius**

• Prime Minister Modi jointly inaugurated the new Supreme Court building of Mauritius with his Mauritian counterpart Pravind Jugnauth. The inauguration took place through video conference.
The Supreme Court building has been constructed with Indian grant assistance of 30 US million dollars. It has been constructed under the India-assisted infrastructure project in the capital city of Port Louis after the outbreak of Coronavirus.

75th Anniversary Of Hiroshima Atomic Bombing

- Japan on 6th August, 2020 marks 75 years since the world’s first atomic bomb attack, with the coronavirus pandemic forcing a scaling back of ceremonies to commemorate the victims.
- The bomb attack on Hiroshima killed around 1,40,000 people. Three days later, the United States dropped a second atomic bomb on Nagasaki, where 74,000 people were killed.
- The United States has never apologised for the bombings, which many in the US see as having ended the war. Japan announced its surrender just days later on August 15, 1945, and some historians argue the bombings ultimately saved lives by avoiding a land invasion that might have been significantly more deadly.

High Impact Community Development Projects (HICDP)

- India handed over a symbolic cheque to the Maldivian government to begin the implementation of nine projects under the High Impact Community Development Projects (HICDP).
- This follows India and the Maldives signing a bilateral pact on HICDPs in March 2019. Under the pact, a total grant of $ 5.6 million was announced for executing high-impact grant projects and a cash grant of about $ 7 million for the execution of small projects.
- The HICDPs are chosen by the Government of Maldives through the Ministry of Foreign Affairs and are those with a high-level of community impact and participation in the areas of livelihood and income generation, health, education, gender and child empowerment, sports and sustainable development.

Gandhi-King Scholarly Exchange Initiative Act

- The foreign affairs committee of the US House of Representatives has passed a legislation - Gandhi-King Scholarly Exchange Initiative Act – to promote the legacies of Mahatma Gandhi and Martin Luther King Jr.
- The act would:
  - Create an annual educational forum held in the U.S. and India that focuses on the social justice, civil and human rights legacies of Mohandas Gandhi and Martin Luther King, Jr.;
  - Create a student exchange program for students in the U.S. and India at all academic levels;
  - Establish a professional development training program called the Gandhi-King Global Academy within the U.S. Institute of Peace (USIP);
  - Establish the U.S.-India Gandhi-King Development Foundation within the U.S. Agency for International Development (USAID) which would provide grants to private nongovernmental entities to address critical humanitarian, environmental, and development issues in India.

15th India-EU Summit

- The 15th Summit between India and the European Union (EU) was held in virtual format on 15th July 2020.
• The leaders adopted the "India-EU Strategic Partnership: A Roadmap to 2025" to guide cooperation between India and the EU over the next five years.

• They welcomed the signing of the India-EURATOM Agreement on research and development cooperation in the peaceful uses of nuclear energy.

• They also adopted a Joint Declaration on Resource Efficiency and Circular Economy and welcomed the upcoming renewal of the India-EU Science and Technology Agreement for another five years.

• They welcomed the ongoing activity in India of the European Investment Bank and the upcoming planned investments of Euros 550 million in the Pune and Bhopal Metro Rail Projects.

• India and the EU will reinforce their cooperation in the International Solar Alliance (ISA) to promote the deployment of solar energy, and in the International Platform on Sustainable Finance (IPSF) to mobilise private capital towards environmentally sustainable investments.

• The EU looks forward to cooperating with the Coalition for Disaster Resilient Infrastructure (CDRI) launched by India to ensure that infrastructures are resilient to climate change.

Additional Information: EU is India’s largest trading partner for goods with trade exceeding $100 billion. India also has a large services trade of approximately $40 billion. Despite this, India represents only about 2% of EU external trade.

Istanbul Convention
• It is a European treaty aimed at preventing violence against women
• Recently Poland left the treaty citing "harmful" because it required schools to teach children about gender.
• The convention sets minimum standards for governments to meet when tackling violence against women. When a government ratifies the Convention, they are legally bound to follow it.
• It is a human rights treaty of the Council of Europe against violence against women and domestic violence which was opened for signature on 11 May 2011, in Istanbul, Turkey. Effective from 2014.
• Ratified by 34 countries (India has neither signed nor ratified).

Council of Europe
• The Council of Europe was founded on 5 May 1949.
• It is an international organisation whose stated aim is to uphold human rights, democracy and the rule of law in Europe.
• Membership is open to any European country, provided they meet specific democratic and human rights standards. Currently it has a total of 47 member states.

Weibo Diplomacy
• After the government banned 59 Chinese apps, Prime Minister Narendra Modi has decided to quit the Chinese microblogging website Sina Weibo, which he had joined a few years ago.
• This marks a sudden end to Mr. Modi’s “Weibo diplomacy” in China that was launched with much fanfare in 2015 as a means to directly communicate with the people of China before his first visit there as Prime Minister.
• Weibo diplomacy: Foreign embassies communicating on Chinese social media.
United Nation Peacekeeping Operations
The United Nation has suspended the rotation and deployments of the peacekeepers until June 30. The Special Committee on Peacekeeping Operations of the United Nations is known as the 'C34'.

Milk Tea Alliance
It is a social media evolved term used to describe an online democratic solidarity movement from Thailand, Hong Kong and Taiwan against the authoritarianism of the Chinese Government and questioned whether CoronaVirus had emerged in a laboratory in Wuhan.
Trends In World Military Expenditure, 2019


- India has become the third largest military spender in the world, after the US and China. India’s “tensions” and “rivalry” with Pakistan and China are among the main reasons for its increased military expenditure.

- India’s military spending grew by 6.8 percent to $71.1 billion in 2019; 259 per cent over the 30-year period 1990 and 2019 and by 37 per cent over the decade 2010–19.
  - India’s military spending has also grown due to an expanding salary and pension bill of its armed forces personnel and capital expenditure for procuring warships, submarines, aircraft and helicopters.

- Total global military expenditure rose to $1,917 billion in 2019, which is an increase of 3.6 per cent from 2018 and the largest annual growth in spending since 2010.

  Established in 1966, SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament.

NOOR

- Iran announced that it successfully launched Noor, the nation’s first military satellite.

- The two-stage satellite launch took off from Iran’s Central Desert. The satellite successfully reached an orbit of 425 kilometers above the Earth’s surface.

Unified Commanders Conference (UCC)

- Unified Commanders Conference (UCC), which was scheduled to be held in April, has been postponed. UCC is the annual meeting of three armed force services and the Ministry of Defence to plan India’s long term security.

- The event is chaired by the Defence Minister and attended by the three Service Chiefs and senior officers of the Services and the Defence Ministry in addition to the Minister of State for Defence, the Chief of Defence Staff and the National Security Advisor.

- It provides a platform for discussions at the apex level on all “Joint Issues” amongst the three Services and Ministry of Defence and enables stock taking of the previous year and planning the way ahead for the next year.

Tour Of Duty

- The Indian Army is considering a proposal that entails allowing common citizens to voluntarily join the force for three years as part of a model called “Tour of Duty”.

"Tour of duty" is for youths who "do not want to make defence services their permanent vocation, but still want to experience the thrill and adventure of military professionalism".

- It will be implemented on a trial basis for officers and other ranks in the army for a limited number of vacancies.
- The pay scale will be at par with the regular Army without any pension or mandated "severance package". However, battle casualties and disabled soldiers will be treated at par with regular soldiers.
- Individual's earnings for the three-year period could be made tax-free, and he/she could be given preference in public sector jobs as well as post-graduate courses.

**Missile Park 'Agneeprastha'**

- Foundation Stone for a Missile Park "AGNEEPRASTHA" was laid at INS Kalinga.
- The Missile Park, once completed, will be dedicated to all the officers, sailors and support staff of INS Kalinga, who have served in this premier operation-support Base of the Eastern Naval Command since its establishment in 1981.

**INS Kalinga**

- It is a premier Naval Establishment located on the Visakhapatnam - Bheemunipatnam beach road.
- It is responsible for preparing, storing and delivering advanced missiles to ships of the Eastern Fleet.

**The Resistance Front (TRF)**

- TRF had claimed responsibility for the April 5 incident along the Line of Control in the Kupwara sector in North Kashmir, where five army personnel were killed.
- TRF, a front of the Lashkar-e-Taiba (LeT), was promoted by Pakistan and had been created in August following the reading down of Article 370.

**Why It Has Been Created?**

- After the abrogation of Jammu Kashmir's special status, Pakistan was under pressure to do something from its constituency in Kashmir. But with FATF (Financial Action Task Force) timelines on the back of its mind, it has decided to cast a new militant outfit that is secular in its name.
- Lashkar and Jaish-e-Mohammad had religious connotation and Pakistan didn't want that. They wanted to secularise the Kashmir militancy and make it appear indigenous. Hence, they opted for 'Resistance' — that has some currency in the global politics — in its name.

**PAK DA**

- Russia has begun building a prototype of its first stealth bomber known as the PAK DA.
- PAK DA, will compete with the U.S. B-2 strategic stealth bomber which entered service in 1997. China is also developing its own stealth bomber - the Xian H-20.
- Russia has already developed its own stealth fighter, the Sukhoi-57. It first flew in 2010 but has yet to be manufactured in large numbers.

**ICGS Sachet**

- The Union Defence Minister commissioned Indian Coast Guard Ship (ICGS) Sachet and two interceptor boats (IBs) C-450 and C-451 in Goa.
• The ICGS Sachet, the first in the series of five offshore patrol vessels (OPVs), has been designed & built indigenously by Goa Shipyard Limited (GSL).

• The ships, on joining the Coast Guard fleet, will be deployed extensively for Exclusive Economic Zone (EEZ) surveillance, coastal security and other duties.

**INLCU L57**

• INLCU L57, the seventh Landing Craft Utility (LCU) Mark IV warship was commissioned into the Indian Navy. It was built by the Garden Reach Shipbuilders and Engineers Limited (GRSE).

• LCU Mark IV is an amphibious ship with its primary role being transportation and deployment of main battle tanks, armoured vehicles, troops and equipment from ship to shore.

**Defence Testing Infrastructure Scheme**

• Centre gives nod for Defence Testing Infrastructure Scheme with an outlay of ₹400 crore for creating state-of-the-art testing infrastructure for domestic defence & aerospace manufacturing sector.

• The Scheme would run for the duration of five years and envisages to set up six to eight new test facilities in partnership with private industry. This will facilitate indigenous defence production, consequently reduce imports of military equipment and help make the country self-reliant.

• The projects under the scheme will be provided with up to 75% government funding in the form of ‘Grant-in-Aid’. The remaining 25% of the cost will be borne by the Special Purpose Vehicles (SPV), whose constituents will be Indian private entities and State Governments.

**Aero India**

• The 13th edition of Aero India will be held from February 3 to February 7, 2021 in Bengaluru.

• Aero India is a biennial air show and aviation exhibition which began in 1996, and has emerged as the largest aerospace exhibition in Asia.

• Bengaluru has been host to all the editions of Aero India starting from inaugural edition in 1996.

• Organised by: The Defence Exhibition Organisation, Ministry of Defence.

**Spike-LR Anti-Tank Guided Missiles**

• The Army is set to place a repeat order for Spike-LR (Long Range) Anti-Tank Guided Missiles (ATGM) from Israel as part of emergency procurement.

• Spike LR is a 4TH generation missile that can engage a target with precision at ranges up to 4 km.

• In addition to fire and forget capability, the missile also has the ability to fire, observe and update, providing substantial flexibility to the firer to pinpoint the impact point.

• The missile has an inbuilt seeker, which gives the firer the flexibility to use any of two modes: Day (CCD) and Night (IIR). The dual seeker adds to the missile’s reliability.

**DAC Approved New Weapons**

• Defence Acquisition Council (DAC) cleared proposals worth close to Rs 39,000 crore that will boost the combat capabilities of Army, Navy and the Air Force. It includes the following-
Pinaka missile system for the Army: It is an all-weather, indirect fire, free flight artillery rocket system. It consists of Rocket, Multi Barrel Rocket launcher, Battery Command Post, Loader cum Replenishment Vehicle, Replenishment Vehicle and Digicora MET Radar.

Astra Missiles with Beyond Visual Range (BVR) capability will serve as a force multiplier. It is designed to be mounted on fighter aircraft. It can be launched in autonomous and buddy mode of operation with features for Lock-On-Before Launch (LOBL) and Lock-On After Launch (LOAL).

MIG 29 & Su-30 MKI Fighter jets: DAC approved procurement of 21 MIG-29 from Russia. It is a twin-engine, multirole fighter jets, developed by the Soviets in 1970s, but has been upgraded since.

Development of Long-Range Land Attack Cruise Missile Systems (LRLACM): It is aimed at enhancing India’s firing range from between 400 km and 500 km of the Brahmos to 1000 km.

Sprinklr Controversy

The State government has issued a set of guidelines for the collection and processing of personal information in the wake of the Sprinklr controversy.

Kerala government went into a deal with a US-based tech firm “Sprinklr” to handle the health related data of 1.75 lakh people under quarantine in the state. According to the government, this was done as an emergency measure to collate the health data in order to understand how the pandemic would behave in Kerala.

However, opposition slammed the move as government did not follow the procedures in appointing Sprinklr and thereby risked the transfer of crucial health data of thousands of people to pharmaceutical companies. They allege that the individual consent of people under quarantine was not taken.

Operation Desert Chase

Operation Desert Chase - an anti-espionage operation was started by Military Intelligence in early 2019. It successfully culminated on June 8, 2020 with the arrest of two men. Both the men were civil defence employees.

They were on the payrolls of ISI and allegedly passed information relating to the trains transporting ammunition across the country.

Naval Innovation and Indigenisation Organisation (NIIO)

Ministry of Defence launched NIIO to boost self-reliance in the defence manufacturing sector.

The NIIO puts in place dedicated structures for the end users to interact with academia and industry towards fostering innovation and indigenisation for self-reliance in defence in keeping with the vision of Atmanirbhar Bharat.

The NIIO is a three-tiered organisation. Naval Technology Acceleration Council (N-TAC) will bring together the twin aspects of innovation and indigenisation and provide apex level directives. A working group under the N-TAC will implement the projects. A Technology Development Acceleration Cell (TDAC) has been created for induction of emerging disruptive technology in an accelerated time frame.
**OPV Sarthak**

- An Offshore Patrol Vessels (OPV) for the Indian Coast Guard was launched and re-christened as Indian Coast Guard Ship ‘Sarthak’.
- OPV Sarthak is the 4th in the series of five OPVs. It has been designed & built indigenously by Goa Shipyard Limited (GSL) in line with the vision of ‘Make in India’.
- **Features**: The Ship is fitted with state-of-the-art Navigation and Communication equipment, sensor and machinery. It is designed to embark and carry a twin-engine helicopter, four high speed boats and one inflatable boat for swift boarding and Search & Rescue operations. It is also capable of carrying limited pollution response equipment to undertake oil spill pollution response at sea.
- The ship will be deployed extensively for EEZ surveillance and Coastal Security.

**Draft Defence Production and Export Promotion Policy (2020)**

- **Goals and Objectives:**
  - To achieve a turnover of Rs 1,75,000 Crores (US$ 25Bn) including export of Rs 35,000 Crore (US$ 5 Billion) in Aerospace and Defence goods and services by 2025.
  - To develop a dynamic, robust and competitive Defence industry, including Aerospace and Naval Shipbuilding industry to cater to the needs of Armed forces with quality products.
  - To reduce dependence on imports and take forward "Make in India" initiatives through domestic design and development.
  - To promote export of defence products and become part of the global defence value chains.
  - To create an environment that encourages R&D, rewards innovation, creates Indian IP ownership and promotes a robust and self-reliant defence industry.
- **Focus areas**: Procurement Reforms, Indigenization & Support to MSMEs/Startups, Optimize Resource Allocation, Investment Promotion, FDI & Ease of Doing Business, Innovation and R&D, DPSUs and OFB, Quality Assurance & Testing Infrastructure Export Promotion.

**APT29**

- UK and its allies publicly blamed APT29 for cyber-attacks on organizations involved in coronavirus vaccine development.
- APT29, also known as Cozy Bear, is a cyberespionage group allegedly linked to Russian state intelligence agencies. Earlier, this group had hacked into election networks before the 2016 U.S. presidential election.
- The cyberespionage groups dubbed APT28 (aka Fancy Bear) and APT29 (aka Cozy Bear and The Dukes) are believed to correspond to Russia’s military intelligence agency GRU and its state security organization FSB, respectively.
- These warriors have been involved in many sophisticated cyber-attacks in the past. They attacked critical systems in Estonia in 2007 over the relocation of a Soviet-era memorial. The 2015 cyberattack on three of Ukraine’s regional power distribution companies knocked out power to almost a quarter-million people.
**Anti-tank Guided Missile ‘Dhruvastra’**

- Defence Research and Development Organisation conducts flight trials of the anti-tank guided Nag Missile (HELINA), which has been named now as Dhruvastra.
- This is categorized as the third-generation, fire-and-forget, anti-tank guided missile and is meant to support both the air borne forces of the Indian Army as well as the Mechanised infantry.
- The missile in the helicopter-launched configuration has been designated as Helicopter-launched NAG (HELINA).
- DRDO has developed this missile under the Integrated Guided Missile Development Programme (IGMDP).

**Arad and Carmel**

- Two latest Israeli assault rifles — the Arad and the Carmel — are set to be manufactured in India.
- The assault weapons are to be produced under the ‘Make in India’ initiative. A plant had been set up in Madhya Pradesh in 2017 by Israel Weapons System (IWI) in a joint venture called PLR Systems.

**Kargil Vijay Diwas**

- 21st Kargil Vijay Diwas was celebrated on 26 July to *commemorate the victory of the Indian soldiers over the infiltrating Pakistani troops.*
- The Kargil War fought between May-July of 1999 in the Kargil district of Jammu and Kashmir along the Line of Control. *Operation Vijay was launched by the Indian army to throw back the intruders.*
- On July 26, 1999, India successfully regained command over all the high outposts.

**BlackRock**

- Security firm ThreatFabric has alerted about a new malware, called BlackRock, which can *steal information like passwords and credit card information* from about 377 smartphone applications, including Amazon, Facebook, Gmail.
- BlackRock isn’t exactly a new malware. In fact, it is based on the leaked source code of the Xeres malware, *itself derived from malware called LokiBot*. The only big difference between BlackRock and other Android banking trojans is that it *can target more apps than previous malwares.*
- When the malware is first launched on the device, it hides its icon from the app drawer, making it invisible to the end-user. It then asks for accessibility service privileges. Once this privilege is granted, BlackRock grants itself additional permissions required to fully function without having to interact any further with the victim.

**T-90 Tanks**

- The Acquisition Wing of the Ministry of Defence (MoD) signed a ₹557-crore contract with the Bharat Earth Movers Limited (BEML) for the procurement of 1,512 *mine ploughs for T-90 Tanks.*
- These mine ploughs will be fitted on T-90 Tanks of the Indian Armoured Corps which will facilitate individual mobility to the tanks while negotiating mine field. The *mobility of the tank fleet will enhance manifold* which in turn would extend the reach of the armoured formations deep into enemy territory without becoming a mine causality.
• As per the procedure, the contract has **Buy and Make (Indian) categorisation** with a minimum of 50% indigenous content in the Make portion.

**Passage Exercise (PASSEX)**

• Indian naval ships conducted a **Passage Exercise (PASSEX)** with the United States Navy’s **USS Nimitz** carrier strike group near the Andaman and Nicobar (A&N) islands as it is transiting the Indian Ocean. The exercise comes amidst high alert by the Navy in the Indian Ocean Region (IOR) due to the ongoing stand-off with China along the border in Ladakh.

• As part of this, four Indian naval ships, including a stealth corvette, teamed up with USS Nimitz and three other U.S. ships. **USS Nimitz is the world's largest aircraft carrier.**

**Negative Imports List for Defence**

• The Defence Ministry announced a list of 101 items that the Defence Ministry will stop importing. It essentially means that the Armed Forces—Army, Navy and Air Force—**will only procure all of these 101 items from domestic manufacturers.** The manufacturers **could be private sector players or defence Public Sector Undertakings (DPSUs).**

• Government intends to reach a turnover of $25 billion through indigenously manufactured defence products and also expects to export products worth $5 billion.

• Government has also decided that in **any government contract over ₹200 crore, no foreign company can participate in the tendering process.**

**SRIJAN Portal**

• Ministry of Defence (MoD) launched Department of Defence Production, MoD’s portal SRIJAN.

• It is a ‘one stop shop online portal that provides **access to the vendors to take up items that can be taken up for indigenization.**

• The portal displays information in a structured way, which includes the item name, image and specification, values of imports, NATO Classification (indicative), etc.

• On this portal, DPSUs/OFB/SHQs can display their items which they have been importing or are going to import which the Indian Industry can design, develop and manufacture as per their capability or through joint venture with OEMs.

**Draft ‘Aids to Navigation Bill 2020’**

• The draft bill is proposed to **replace the Lighthouse Act, 1927** to incorporate the best global practices, technological developments and India's International obligations in the **field of Aids to Marine Navigation.**

• This initiative is part of the **proactive approach** adopted by the **Ministry of Shipping** by repealing colonial laws and replacing them with modern and contemporary needs of the maritime industry.

• The bill **aims to regulate state-of-the-art technologies of marine navigation.**

• It provides for **identification and development of heritage lighthouses.**

• **Directorate General of Lighthouses and Lightships** is empowered with additional power such as Vessel Traffic Service, Wreck flagging, training and certification.
Demo-2 Mission

- Two NASA astronauts splashed down safely in the Gulf of Mexico for the first time in a commercially built and operated American crew spacecraft (SpaceX's Crew Dragon) returning from the International Space Station. It was the first water landing for a crewed US spaceship since the 1975 Apollo-Soyuz mission.
- NASA’s SpaceX Demo-2 test flight has earlier lifted off for International Space Station (ISS), becoming the first crewed flight to launch from American soil since the conclusion of the space shuttle era in 2011.
- The Demo-2 mission is part of NASA’s Commercial Crew Program, and will see astronauts Robert Behnken and Douglas Hurley fly on SpaceX’s Crew Dragon spacecraft. The craft lifted off from a Falcon 9 rocket, from Florida. The Crew Dragon spacecraft being used for this mission can stay in orbit for up to 110 days.
- NASA’s Commercial Crew Program: The main objective of this program is to make access to space easier in terms of its cost, so that cargo and crew can be easily transported to and from the ISS, enabling greater scientific research.

Antarctic Impulsive Transient Antenna (ANITA)

- Researchers using NASA's ANITA have succeeded in finding “a fountain of high-energy particles erupting from the ice” in Antarctica which according to the researchers could be proof of a parallel universe.
- Designed by NASA, ANITA is a stratospheric balloon payload flying over Antarctica. The main aim of ANITA is to detect cosmic-ray air showers through radio-wave signals after bouncing off the ice.
- ANITA is the first NASA observatory for neutrinos of any kind. The ANITA instrument detects these ultra-high energy neutrinos by use of the Askaryan effect. This effect predicts the production of a coherent radio emission from the cascade of particles produced in a high-energy particle interaction.
- ANITA succeeded in detecting the ‘fountain’ of high-energy particles in 2006 and 2014 but the researchers initially thought them as background noise or glitches.

Tianwen-1

- China will launch its first Mars mission, the ‘Tianwen-1’, which is expected to land on the Red Planet’s surface in the first quarter of 2021.
- Chinese mission will be the first to place a ground-penetrating radar on the Martian surface, which will be able to study local geology, as well as rock, ice, and dirt distribution.
• Tianwen-1, an all-in-one orbiter, lander and rover will lift off on a Long March 5 rocket.
• China’s previous ‘Yinghuo-1’ Mars mission, which had piggybacked on a Russian spacecraft, had failed after it could not leave the Earth’s orbit and disintegrated over the Pacific Ocean in 2012.

NGC 3895
• NASA’s Hubble telescope released an image of a spiral galaxy, NGC 3895, that, in colour and shape, resembles a coffee made by a barista.
• The galaxy, located at a distance of over 161 million light years is a part of Ursa Major. It was discovered by German-born British astronomer William Herschel on March 18, 1790. The galaxy has a diameter of approximately 45,000 light-years.

Ursa Major is the largest northern constellation and third largest constellation in the sky.

Arktika-M Satellite
• Russia announced to launch first Arktika-M satellite for monitoring Arctic climate and environment at the end of the year.
• The satellite will be launched using a Soyuz-2.1b carrier rocket with the Fregat booster.
• Arktika-M remote-sensing and emergency communications satellites will gather meteorological data in the polar regions of the Earth, which will allow to improve weather forecasts and will enable scientists to better study climate change.

FlytNow
• FlytBase, an enterprise drone automation company has built FlytNow that has enabled police authorities to keep eagle-eye vigilance over the lockdown situation due to Covid-19.
• FlytNow is an Internet of Drones (IoD) platform that allows seamless integration of intelligent fleets of drones with cloud-based business applications. It is currently being used by Police of many states including Maharashtra, Gujarat, Karnataka and Andhra Pradesh.
• The IoD platforms assists the Police officials to stream live multi-video feeds from multiple drones to their control room, thus providing situational awareness and enabling them to respond quickly to emergencies.

GARUD Portal
• Ministry of Civil Aviation and the Directorate General of Civil Aviation (DGCA) have launched the ‘Government Authorisation for Relief Using Drones’ (GARUD) portal for providing fast track conditional exemptions to government agencies for COVID-19 related drone operations.
• The step has been taken to aid government entities in addressing the challenges posed by COVID-19 and will remain in force until further orders.

Styrene Gas
• Visakhapatnam gas leak has claimed at least 11 lives and affected thousands of residents. The source of the leak was a styrene plant.
• **Styrene**: It is a flammable liquid that is used in the manufacturing of polystyrene plastics, fiberglass, rubber, and latex. It is also found in vehicle exhaust, cigarette smoke, and in natural foods like fruits and vegetables.

• **Effects of Styrene**: Short-term exposure can result in respiratory problems, irritation in the eyes, irritation in the mucous membrane, and gastrointestinal issues. And long-term exposure could drastically affect the central nervous system and lead to other related problems like peripheral neuropathy. It could also lead to cancer and depression in some cases.

**Genes Rht14 and Rht18**

• Scientists at Agharkar Research Institute (ARI), Pune have mapped two alternative dwarfing genes Rht14 and Rht18 in wheat that can eliminate rice crop residue burning.

• These genes are associated with better seedling vigour and longer coleoptiles (sheath protecting the young shoot tip).

• Scientists developed DNA-based markers for a better selection of these genes in wheat breeding lines. The improved lines will make it possible for farmers to sow wheat under rice stubble-retained conditions. It means farmers won’t have to resort to stubble burning for preparing ground for sowing their next crop, wheat.

• Besides, the new variety will allow deeper sowing of wheat seeds to avail advantage of residual moisture in the soil under dry environment and thus reducing irrigation cost of its cultivation.

**Solar Minimum**

• The sun is said to have gone into a state called the ‘solar minimum’ and is about to enter the deepest period of ‘sunshine recession’ as sunspots are virtually not visibly at all.

• Every 11 years or so, sunspots fade away, bringing a period of relative calm. This is called the solar minimum. And it’s a regular part of the sunspot cycle.

• While intense activity such as sunspots and solar flares subside during solar minimum, that doesn’t mean the sun becomes dull. Solar activity simply changes form.

• During Solar Minimum we can see the development of long-lived coronal holes. The coronal holes are reportedly considered as vast regions in the sun’s atmosphere. These vast regions are openings of Sun’s magnetic field that allow streams of solar particles to escape the sun as the fast solar wind.

**Solar Minimum Effects on Earth:**

• The Solar wind from coronal holes will temporarily create disturbances in the Earth’s magnetosphere, called geomagnetic storms, auroras, and disruptions to communications and navigation systems.

• The space weather during solar minimum will also affect Earth’s upper atmosphere on satellites in low Earth orbit changes.

• Solar minimum will change the space weather significantly which will lead to an increase in the number of galactic cosmic rays that reach Earth’s upper atmosphere. This may cause health risks to astronauts travelling through space.

**Sunspot**: It’s an area of intense magnetic activity on the surface of the Sun—a storm—that appears as an area of darkness.
Earth’s Magnetic Field

- Scientists say that earth’s magnetic field is gradually weakening which is resulting in technical disturbances in some satellites orbiting our planet.
- The magnetic field is vital for life on earth as it protects us from the harmful cosmic radiation and charged particles emitted from the sun.
- The field is mostly generated by the ocean of super-hot liquid iron that makes up Earth’s outer core, around 3,000 km below our feet. It creates electric currents that generate and change our electromagnetic field. This field varies in strength and direction and over the last 200 years, it has lost around 9% of its strength.
- South Atlantic Anomaly: Between 1970 and 2020, the magnetic field weakened considerably in a large region stretching from Africa to South America, known as the ‘South Atlantic Anomaly’. This area has grown and moved westward at a rate of around 20km per year.
- Swarm satellites are designed to identify and precisely measure the different magnetic signals that make up Earth’s magnetic field. Researchers are using European Space Agency (ESA)'s Swarm constellation to improve their understating of this area.

Shifting of Earth’s North Magnetic Pole

- Scientists discovered that there is a drastic shift in the Earth’s magnetic north pole from Canada to Siberia in Russia.
- Changes in the flow of molten material in the planet's interior have altered the strength of the above regions of negative magnetic flux. This change in the pattern of flow has weakened the patch under Canada and ever so slightly increased the strength of the patch under Siberia. This is why the North Pole has left its historic position over the Canadian Arctic and crossed over the International Date Line towards Russia.
- Earth has three poles at the top of the planet. A geographic pole which is where the planet's rotation axis intersects the surface. The geomagnetic pole is the location which best fits a classic dipole (its position alters little). And then there is the North Magnetic, or dip, Pole, which is where field lines are perpendicular to the surface.

Nearest Black Hole To Earth

- A team of astronomers led by the European Southern Observatory (ESO) have discovered the nearest black hole from Earth.
- Using the La Silla Observatory of the ESO in Chile, the team discovered this black hole in a triple structure located just 1,000 light-years from Earth. This black hole has been named as HR 6819.
- HR 6819 is one of the very first to be found that does not actively interfere with their surroundings. In almost all previous cases, the black holes were actively interacting with their surroundings, which was apparent from the powerful release of X-ray bursts. This interaction occurred as part of a binary black hole, where a black hole was drawing material from a companion star. This material will fall into a disk around the event horizon of the black hole and then slowly accrete onto its surface, releasing radiation in the process.
Luhman 16A

- A group of international astrophysicists have identified cloud bands on the surface of Luhman 16A, one of a pair of binary brown dwarfs in the Vela constellation.
- Luhman 16 is a binary star system, the third closest system to the Sun after Alpha Centauri and Barnard’s star. At a distance of about 6.5 light years from the Sun, this pair of brown dwarfs referred to as Luhman 16A and Luhman 16B orbit each other, casting a dim light.
- Understanding the cloud system over a brown dwarf can shed light on the pressure, temperature and climate on the surface of the celestial body.
- Brown dwarfs are also called failed stars, because their masses are intermediate to the largest planets and the smallest main sequence stars. Their masses being too small, they are unable to sustain fusion of their hydrogen to produce energy. It is believed that some of the more massive brown dwarfs fuse deuterium or lithium and glow faintly.

Blazar

- Researchers from the Indian Institute of Astrophysics (IIA), Bangalore have conducted the first systematic study on the gamma-ray flux variability nature on different types of blazars.
- At the center of most galaxies, there’s a massive black hole that can have mass of millions or even billions of Suns that accrete gas, dust, and stellar debris around it.
- As these material falls towards the black hole, their gravitational energy gets converted to light forming active galactic nuclei (AGN). A minority of AGN (~15%) emit collimated charged particles called jets travelling at speeds close to the speed of light.
- Blazars are AGN whose jets are aligned with the observer’s line of sight. Some blazars are thought to host binary black holes in them and could be potential targets for future gravitational-wave searches.
- Blazars are the most luminous and energetic objects in the known universe and they were found to be emitters of gamma-rays in the 1990s.

Pseudocapacitors

- Scientists at the Institute of Nano Science and Technology (INST) have developed a stable material for pseudocapacitors. The material can offer a low-cost scalable energy storage solution as an alternative to batteries.
- Pseudocapacitors are a type of supercapacitors which store electrical energy by electron charge transfer between electrode and electrolyte. This is accomplished through electrosorption, reduction-oxidation reactions, and intercalation processes, termed pseudocapacitance.
- The team has developed the pseudocapacitive material, a hybrid xerogel structure, for the very first time. The hybrid material was fabricated by the integration of a well-known organic molecule, dopamine onto a conductive matrix, like graphene.
**Do you Know**

- **Aerogel**: An aerogel is obtained when the **liquid phase of a gel is replaced by a gas** in such a way that its solid network is retained, with only a slight or no shrinkage in the gel. It was firstly achieved under supercritical conditions but it is now possible under ambient drying conditions as well. It has **shrinkage < 15%**
- **Xerogel**: It is obtained when the **liquid phase of a gel is removed by evaporation**. It may retain its original shape, but often cracks due to the extreme shrinkage that is experienced while being dried. It has **shrinkage > 90%**

Therefore the method of drying will dictate whether an aerogel or xerogel will be formed.

**EventBot**

- The Indian Computer Emergency Response Team (CERT-In) has issued an advisory warning people against a trojan called EventBot.
- EventBot is a “**mobile-banking Trojan and info-stealer** that abuses Android’s in-built accessibility features to steal user data from financial applications, read user SMS messages and intercept SMS messages, allowing malware to bypass two-factor authentication.”
- A trojan is essentially a type of malware that is attached to what seems to be a legit programme.

**AI Virtual Assistant Pai**

- National Payment Corporation of India (NPCI) launched an **artificial intelligence (AI) based chatbot, PAi**, to create awareness around its products like FASTag, RuPay, UPI, AePS on a real time basis.
- The chatbot aims to improve digital financial inclusion in the country.

**Lightweight Carbon Foam**

- CSIR-Advanced Materials and Processes Research Institute developed lightweight carbon foam that can **replace the lead-acid batteries**, which are heavy, corrosive, and have poor thermal stability.
- These carbon foams are **non-toxic, easy to fabricate, affordable, and insoluble in water**. The foam is **highly resistive to corrosion**, has good electrical and thermal conductivity with high surface area.
- It can also be useful for heat sinks in power electronics, electromagnetic interference shielding in aerospace, hydrogen storage and electrode for lead-acid batteries.
- The carbon foam will also be cost-effective for the **removal of arsenic, oil, and other metals from contaminated water**.

**GW190412**

- Gravitational wave observatories at **Laser Interferometer Gravitational Wave Observatory (LIGO)** scientific collaboration have detected a **merger of two unequal-mass black holes**.
- The event, **dubbed GW190412**, was detected nearly a year ago, and this is almost five years after the first ever detection of gravitational wave signals by these powerful detectors.
• The event involved two black holes of unequal masses coalescing, one of which was some 30 times the mass of the Sun and the other which had a mass nearly 8 times the solar mass.

Do You Know
• LIGO is a large-scale physics experiment and observatory (built in US) to detect cosmic gravitational waves predicted by Einstein’s General Theory of Relativity. The initial LIGO observatories were funded by the National Science Foundation.
• It is a multi-kilometer-scale gravitational wave detectors to measure the minute ripples in spacetime caused by passing gravitational waves from cataclysmic cosmic events such as colliding neutron stars or black holes, or by supernovae.
• LIGO-India Project: This project will be a mega science project to be jointly funded by the Department of Atomic Energy (DAE) and the Department of Science & Technology (DST). It is envisaged as a collaborative project between a consortium of Indian research institutions and the LIGO Laboratory in USA, along with its international partners.

Carbon Nitride Quantum Dots (g-CNQDs)
• Scientists at the Institute of Nano Science and Technology (INST), have found a low-cost metal-free nanomaterial for visible light microbial disinfection which can be an alternative to silver and other metal-based materials.
• g-CNQDs are found to be efficient for visible-light-driven antibacterial activity apart from being biocompatible with mammalian cells. These nanomaterials possess enhanced biocidal activity attributed to larger surface area of g-CNQDs having more reactive sites and optical absorption both in the ultraviolet and visible region.
• It has the ability to generate reactive oxygen species (ROS) which rapidly interacts and damages the immediately available biological macromolecules such as lipids present on the cell membrane or envelope and proteins present on the cellular surface, towards inactivation of the microorganism.
• The dependence on visible light is also advantageous over regular ultraviolet mediated disinfection, which requires cautious handling of the UV light-emitting devices.

NanoBlitz 3D
• Scientists from International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) has developed NanoBlitz 3D.
• NanoBlitz 3D is an advanced tool for mapping nano-mechanical properties of materials like multi-phase alloys, composites, and multi-layered coatings.
• It enables the performance of a large array, typically consisting of 1000s high-speed nano-indentation tests, wherein each indentation tests takes less than one second to measure hardness and elastic modulus of a given material.
• The high-speed mapping capabilities of the tool can also be used to quickly establish structure-property linkages at a micrometer length scale or higher, which can help to understand multiscale mechanics and aid in development of hierarchical materials. This, in turn, expedites the development of high-performance novel materials under an Integrated Computational Material Engineering (ICME) approach.
**Indian Initiative On Earth Biogenome Sequencing (IIEBS)**

- The Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) has been selected as one of the Biological Knowledge and Resource Centres of the IIEBS.

- IIEBS is a nationwide project to **decode the genetic information of all known species of plants and animals in the country**. It will enable collection and preservation of endangered and economically important species. The decoded genetic information will also be a useful tool to prevent biopiracy.

- The National Institute of Plant Genome Research, New Delhi is the coordinating centre for the nationwide project involving a total of 24 institutes.

- The project is part of the **Earth BioGenome Project**, an international initiative which aims to sequence the genetic codes of all of earth’s eukaryotic biodiversity over a period of 10 years.

Jawaharlal Nehru Tropical Botanic Garden and Research Institute is an autonomous Institute established and functions under the Government of Kerala. It was established in 1979 and situated at Thiruvananthapuram, Kerala.

**Artificial Neural Networks based global Ionospheric Model (ANNIM)**

- Researchers from Indian Institute of Geomagnetism (IIG) have developed a new **ANNIM** using long-term ionospheric observations to predict the ionospheric electron density and the peak parameters.

- Tracking the variability of the **ionosphere is important for communication and navigation**.

- Artificial Neural Networks replicate the **processes in the human brain** (or biological neurons) to solve problems such as pattern recognition, classification, clustering, generalization, linear and nonlinear data fitting, and time series prediction.

**Indian Institute of Geomagnetism (IIG)**

- It was established in 1971 at **Navi Mumbai (Maharashtra)** and an autonomous institute of the **Department of Science & Technology**, Govt. of India.

- The facility is engaged in basic and applied research in **geomagnetism**, as well as allied areas of geophysics, atmospheric physics and space physics, as well as plasma physics.

**Lithium (Li) Abundance In Interstellar Space**

- Researchers at the Indian Institute of Astrophysics (IIA) have discovered hundreds of Li-rich giant stars indicating that Li is being produced in the stars and accounts for its abundance in the interstellar medium.

- They have shown for the first time that the Li enhancement in giants is associated with **central Helium (He)-burning stars**, also known as red clump giants, thereby opening up new vistas in the evolution of the red giant stars.

- This is an important discovery that will help to eliminate many proposed theories such as planet engulfment or nucleosynthesis during red giant evolution in which helium at the centre is not burning.

- Lithium (Li), is one of the three primordial elements, apart from Hydrogen and Helium (He), **produced in the big bang nucleosynthesis** (BBN) whose models predict primordial Li abundance. However, the present measurement of Li in the interstellar medium and very young stars is about 4 times more than the primordial value.
Thus, identifying sources of Li enrichment in our Galaxy has been a great interest to researchers to validate Big Bang Nucleosynthesis as well as a stellar mixing process.

**Do You Know**

- Big Bang Nucleosynthesis (BBN) is the production of nuclei other than those of the lightest isotope of hydrogen during the early phases of the Universe. Primordial nucleosynthesis is believed by most cosmologists to have taken place in the interval from roughly 10 seconds to 20 minutes after the Big Bang.
- It is calculated to be responsible for the formation of most of the universe's helium in various isotopic forms along with small amounts of the hydrogen isotope deuterium and a very small amount of the lithium isotope lithium-7.

**Deep Fakes and Deep Nudes**

- Cybercrime officials in India are tracking apps and websites that produce nude photographs of innocent persons using Artificial Intelligence (AI) algorithms.
- Deepfake is a portmanteau of “deep learning” and “fake”. It is an Artificial Intelligence (AI) software that superimposes a digital composite on to an existing video (or audio). Deepfakes are created by machine learning models, which use neural networks to manipulate images and videos.
- Deep nudes are computer-generated nude images and videos of innocent persons using Artificial Intelligence (AI) algorithms. Essentially, using AI algorithms a person’s words, head movements and expressions are transferred onto another person in a seamless fashion that makes it difficult to tell that it is a deep fake, unless one closely observes the media file.
- Another problem is catfish accounts to deceive people. Catfishing refers to practice of setting up fictitious online profiles, most often for purpose of luring another into a fraudulent romantic relationship.

**Hydrogen Fuel Cell Based Bus and Car Project**

- National Thermal Power Corporation Ltd has invited Global Expression of Interest (EoI) to provide 10 Hydrogen Fuel Cell (HFC) based electric buses and an equal number of Hydrogen Fuel Cell based electric cars in Leh and Delhi.
- The move to procure Hydrogen Fuel Cell based vehicles is first of its kind project in the country, wherein a complete solution from green energy to the fuel cell vehicle would be developed.
- The initiative, will also harness renewable energy for generation of hydrogen and develop its storage and dispensation facilities as part of pilot projects at Leh and Delhi.
- The move to launch hydrogen powered vehicles aims at decarbonizing mobility segment.

**Sex Hormones**

- From trends so far, men have appeared likelier than women to die of COVID-19.
- There is possibility that women’s sex hormones help them fight the infection better than men. A woman’s genetic makeup consists of two X chromosomes (a man has only one of those). Because X chromosomes contain most of the genes related to the immune system, the inference is that women are better equipped to mount an immune response.
Another study suggests that men have higher concentrations of enzyme ACE2 in their blood than women which makes men more vulnerable to COVID-19.

Enzyme ACE2 is an enzyme attached to the outer surface of cells in the lungs, arteries, heart, kidney, and intestines. It lowers blood pressure. ACE2 also serves as the entry point into cells for some coronaviruses including Severe Acute Respiratory Syndrome Coronavirus 2. The human version of the enzyme is often referred to as hACE2.

Silent Hypoxia

Medical practitioners treating people for Covid-19, have reported a condition called ‘silent’ or ‘happy’ hypoxia.

Silent hypoxia’, a form of oxygen deprivation that is harder to detect than regular hypoxia. In Silent hypoxia patients have extremely low blood oxygen levels, yet do not show signs of breathlessness.

The reason why people are left feeling breathless is not because of the fall in oxygen levels itself, but due to the rise in carbon dioxide levels that occur at the same time, when lungs are not able to expel this gas efficiently. This response does not appear to be kicking in in some Covid-19 patients.

In patients with Covid pneumonia, the virus causes air sacs to fall, leading to a reduction in levels of oxygen. However, the lungs initially do not become stiff or heavy with fluid, and remain “compliant” — being able to expel carbon dioxide and avoiding its buildup. Thus, patients do not feel short of breath.

A medical device called a pulse oximeter— used to detect oxygen level in the blood— could help in the early detection of silent hypoxia.

Human Monoclonal Antibodies (hmAbs)

Council of Scientific & Industrial Research (CSIR) approved a multi institutional project to develop hmAbs that can neutralize SARS-CoV-2 in patients.

The project aims to generate hmAbs to SARS-CoV-2 from convalescent phase of COVID-19 patients and select high affinity and neutralizing antibodies. It also aims to anticipate future adaptation of the virus and generate hmAbs clones that can neutralize the mutated virus so that could be readily used for combating future SARS-CoV infections.

Monoclonal antibodies are proteins cloned in the lab to mimic antibodies produced by the immune system to counter an infection. A monoclonal antibody can be made by isolating specific antibodies and multiplying them via various techniques.

They have their genesis in serum, the colourless constituent of blood that contains antibodies. These proteins bind to an antigen, the fragment of an infectious virus in the case of SARS-CoV-2, and either destroy it or block its action.

Estrogen and progesterone are the two main sex hormones that characterise a woman. Estrogen helps her develop female physical features and also maintains her reproductive system. Progesterone is secreted by a temporary endocrine gland that the body produces during the second half of the menstrual cycle, and helps prepare the body for possible pregnancy after ovulation. The male body too has estrogen and produces progesterone, both in smaller amounts.

Hypoxia is a condition wherein there is not enough oxygen available to the blood and body tissues. It can either be generalised, affecting the whole body, or local, affecting a region of the body.
APOE Gene

- A new study has found a link between the severity of Covid-19 and a gene linked to dementia. **Having a faulty gene linked to dementia doubles the risk** of developing severe COVID-19
- The gene is called APOE, and exists in a different forms, one of which is termed e4e4.
- Apolipoprotein E (APOE) is a **protein involved in the metabolism of fats in the body**. It is implicated in Alzheimer’s disease and cardiovascular disease.
- APOE belongs to a **family of fat-binding proteins called apolipoproteins**. It is primarily produced by the liver and macrophages, and mediates cholesterol metabolism.

World Wide Help (WWH)

- IIT Bombay has developed a platform named World Wide Help (WWH) which can be used to **connect people seeking medical help with helpers, such as doctors**.
- The WWH platform can be used with an app or a phone. The user simply calls a dedicated number and can input basic data such as the age of the person in need of help and whom they wish to solicit help from.

Reverse Vaccinology

- A vaccine candidate against SARS-CoV 2 has been developed through ‘reverse vaccinology’ by The Tamil Nadu Dr. M.G.R. Medical University.
- Reverse vaccinology is the name given to the **examination of the genome of an organism in order to identify novel antigens** and epitopes that might constitute vaccine candidates.
- The basic idea behind this technique is that an **entire pathogenic genome can be screened using bioinformatics approaches to find genes**. Next, those genes are filtered for desirable attributes that would make good vaccine targets. Once the candidates are identified, they are produced synthetically and are screened in animal models of the infection.
- The advantage of using ‘reverse vaccinology’ is that **genome sequence and vaccine targets can be found in less time and efficiently**.
- The **downside is that only proteins can be targeted using this process**. Whereas, conventional vaccinology approaches can find other biomolecular targets such as polysaccharides (long chains of carbohydrate molecules).
- The ‘reverse vaccinology’ has been available for the last 10 to 15 years. Using this technique, vaccinations were developed for meningococcal & staphylococcal infections all through the world.

UV Sanitisation Box and Hand-held UV Device

- Defence Institute of Physiology & Allied Sciences (DIPAS) and Institute of Nuclear Medicine & Allied Sciences (INMAS), DRDO laboratories in Delhi have designed & developed Ultraviolet C Light based sanitisation box and hand held UV-C (ultraviolet light with wavelength 254 nanometres) device.
- The UV-C consists of a shorter, more energetic wavelength of light. It is particularly good at destroying genetic material in COVID-19. The **radiation warps the structure RNA which prevents the viral particles from making more copies** of themselves.
The UV-C kills microbes quickly. Sanitisation of the items by employing UV-C light avoids the harmful effects of the chemicals used for the disinfection. This is environment friendly and is a contact free effective sanitisation method.

**Antiviral Nano-coatings**
- As part of the Nano Mission Programme, the Department of Science and Technology (DST) has approved support for **upscaling an antiviral nano-coatings for making triple layer medical masks & N-95 respirator** in large quantities to combat COVID19.
- The **N9 blue nanosilver, which is a highly potent antimicrobial agent**, was developed and will be further modified to form nanocomplexes with Zinc compounds to achieve a synergistic effect. Subsequently, these nanomaterials will be applied as coatings on facemasks and other PPEs to improve their ability to protect.
- Silver is known to have strong antimicrobial activity against bacteria, viruses, and fungus.

**Bug Sniffer**
- Researchers at the Agharkar Research Institute (ARI), Pune have developed bug sniffer.
- **Bug sniffer, which is a biosensor** that uses synthetic peptides, magnetic nanoparticles, and quantum dots to detect the presence of bacteria, providing a cost- and time-effective way of screening water and foodborne pathogens.
- The portable device can **detect as low as ten bacterial cells from a sample size of one millilitre** in just 30 minutes.

**Inactivated Virus Vaccine For Coronavirus**
- Researchers from the Centre for Cellular and Molecular Biology (CCMB) have embarked upon developing an inactivated virus vaccine for the novel coronavirus.
- **In inactivated Virus Vaccine**, active virus is cultured in large numbers and then killed either by a chemical or heat. Although the pathogen is killed, or made to lose its reproduction capacity, various parts of the virus are intact.
- The antigen (the chemical structure) that is recognised by the immune system is left unimpaired. When this dead microbe is introduced, the immune system is tricked to respond by producing antibodies against specific antigens still left intact, without knowing that the pathogen is dud. Inactivated polio vaccine and the rabies vaccines are made this way.

**Atulya**
- Defence Institute of Advanced Technology in Pune, has developed a **microwave steriliser** named ATULYA to disintegrate COVID-19.
- The virus gets disintegrated by **differential heating in the range of 56-60 degree Celsius**.
- It is cost-effective that can be operated in portable or fixed installations, and was tested for human/operator safety and has been found safe. Depending on size and shape of various objects, time of sterilisation is from 30 seconds to one minute. It can be used on any surface except metal.
Corona-Killer

- Garuda Aerospace has brought out an **Automated Disinfecting Unmanned Aerial Vehicle (UAV)** that aids in Sanitization of Public Places, Hospitals & Tall buildings.
- Named as ‘Corona-Killer’, these drones can be used to spray disinfectants on buildings up to 450 feet. Drone operations are faster, longer & safer than manual spraying by workers.

**eCovSens**

- National Institute of Animal Biotechnology (NIAB), Hyderabad, have developed a biosensor that can detect the **novel coronavirus in saliva samples**.
- The new portable device named eCovSens, can be used to detect the presence of novel coronavirus antigens in human saliva **within 30 seconds** using just 20 microlitres of the sample.
- Biosensor consists of a carbon electrode and the coronavirus antibody. The antibody is capable of binding with the spike protein found on the outer layer of the virus. An electrical signal is generated when the antigen and antibody binds.

UV Blaster

- The Defence Research and Development Organisation (DRDO) has developed an **Ultraviolet (UV) Disinfection tower** for rapid and **chemical-free disinfection** of high infection-prone areas.
- The equipment named UV Blaster is “useful for high-tech surfaces like electronic equipment, computers and other gadgets that are not suitable for disinfection with chemical methods. It is also effective for areas with a large flow of people such as airports, shopping malls etc.

**COBAS 6800**

- It is a fully automated, high end machine for performing **real time PCR testing COVID-19**.
- It is enabled with robotics that minimizes the chance of contamination and risk of infection to the health care workers since it can be operated remotely with limited human intervention.

NSafe

- An IIT Delhi startup ‘Nanosafe Solutions’ has launched an **antimicrobial and washable face mask ‘NSafe’**, which is reusable up to 50 launderings, thus greatly cutting down the cost of use.
- NSafe mask has 99.2% bacterial filtration efficiency (at 3 microns) and complies with ASTM standards of breathability and splash resistance. It is believed to be the first fabric based antimicrobial face mask launched in India.
- NSafe mask enhances protection to the wearer through three different mechanisms: mechanical filtration, antimicrobial decontamination and repulsion of aerosol droplets.
**Ventilator Intervention Technology Accessible Locally (VITAL)**

- NASA engineers have developed a new, easy-to-build high-pressure ventilator tailored specifically to treat COVID-19 patients.
- The device, called VITAL, is designed to treat patients with milder symptoms, thereby keeping country’s limited supply of traditional ventilators available for patients with more severe COVID-19 symptoms.
- VITAL can be built faster and maintained more easily than a traditional ventilator, and is composed of far fewer parts, many of which are currently available to potential manufacturers through existing supply chains.

**Hope: UAE Mars Mission**

- United Arab Emirates launches space mission to Mars from Japan, calls it ‘Hope’ Mission. Hope is the Arab world’s first mission to Mars.
- “Hope” was announced in 2015 with the aim of creating mankind’s first integrated model of the Red planet’s atmosphere.
- The spacecraft will orbit Mars to **study the Martian atmosphere and its interaction with outer space and solar winds**. Hope will collect data on Martian climate dynamics, which should help scientists understand why Mars’ atmosphere is decaying into space.
- Hope will **orbit Mars for around 200 days**, after which it will **enter the Red planet’s orbit by 2021**, coinciding with the 50th anniversary of the founding of UAE.
- **No human has set foot on Mars yet** because the atmosphere on Mars is very thin, consisting of mostly carbon dioxide with no breathable oxygen, making it difficult for astronauts to survive there.

**T-Cells**

- At least five studies have shown that people unexposed to and not infected with novel coronavirus may **still exhibit T cell responses specific to this virus**.
- It is thought that SARS-CoV-2-specific T cell responses seen in healthy people might arise from **memory T cells** derived from exposure to ‘common cold’ coronaviruses.
- T cell, also called T lymphocyte, **type of leukocyte (white blood cell) that is an essential part of the immune system**.
- T cells **originate in the bone marrow and mature in the thymus**. In the thymus, T cells multiply and differentiate into **helper, regulatory, or cytotoxic T cells or become memory T cells**. Memory T cells protect against previously encountered pathogens, but their origins are unclear.

**Paddy Watch App**

- Researchers are developing the first **real-time monitoring platform for rice fields**, which will give information about the quantity of rice planted and the harvest achieved.
- The app, being built by researchers from the University of Sydney, can help meet the United Nations-mandated sustainable development goal No.2 — of ‘Zero Hunger’.
- The project has been undertaken in collaboration with **Google Earth and the Group on Earth Observations**.
Comet C/2020 F3 Neowise
• The recently discovered comet called C/2020 F3, also known as NEOWISE, will make its closest approach to the Earth on July 22.
• It was first spotted by NASA’s spacecraft mission Near-Earth Object Wide-field Infrared Survey Explorer (NEOWISE) and hence the name NEOWISE.
• Comet is an icy small body which consists mostly of rocky materials, dust and ice. As they come closer to the sun there is evaporation of volatile contents from these comets. When they start melting, the particles start glowing by the reflected sunlight. This makes the ‘dust tail’ of Comets.
• Comets may be occasionally pushed into orbits closer to the sun and the Earth’s neighborhood due to forces of gravity of other planets.

Supercapacitor
• Scientists at the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), have developed a low-cost, environmentally friendly, and sustainable supercapacitor electrode derived from industrial waste cotton.
• Supercapacitor is a next-generation energy storage device which has advantages such as high power density, long durability, and ultrafast charging characteristic as compared to conventional capacitors and lithium-ion batteries (LIB).

Kuaizhou-11 Rocket
• China’s launch of the Kuaizhou-11 rocket, failed in its mission due to malfunction during the flight.
• Also known as KZ-11, it had a lift-off mass of 70.8 tonnes, and was designed to launch low-Earth and Sun-synchronous orbit satellites. It can lift a 1.0-ton payload to a sun-synchronous orbit at an altitude of 700 kilometres. The three-stage rocket is reportedly based on the DF-21 missile and consists of three solid-fueled stages.
• The mission was China’s 19th launch of 2020, following the successful launch of the APSTAR-6D communications satellite to geosynchronous transfer orbit.

Lithium Production in Stars
• Scientists from Indian Institute of Astrophysics (IIA) found that Lithium production is common among low mass Sun-like stars during their He-core burning phase.
• They identified “He flash” (on-set of He-ignition at the star’s core via violent eruption), at the end of the star’s core hydrogen-burning phase, as the source of Li production. The Sun will reach this phase in about 6-7 billion years.
• The study also suggests new limits (A(Li) > -0.9~dex) for classifying stars as Li-rich, which is 250 times below the threshold (A(Li) > 1.5~dex) used till now.

More Metal in Moon
• NASA said that it’s Lunar Reconnaissance Orbiter (LRO) spacecraft had found evidence that the Moon’s subsurface might have greater quantities of metals such as iron and titanium than thought before.
- The metallic distribution was observed by the Miniature Radio Frequency (Mini-RF) instrument aboard the LRO. Out on a mission to look for ice in polar lunar craters, the LRO’s Mini-RF instrument was measuring an electrical property within lunar soil in crater floors in the Moon’s northern hemisphere. The property, known as the dielectric constant, is the ratio of the electric permeability of a material to the electric permeability of a vacuum.

- Mini-RF team observed that the level of this property increased as they surveyed larger craters, and kept rising in crater sizes up to 5 km in diameter. Beyond that size, the value of the dielectric constant leveled off.

**Winter Diesel**

- India’s armed forces may soon be using winter diesel for operations in high altitude areas such as Ladakh.

- Winter diesel is a specialised fuel that was introduced by Indian Oil Corporation (IOC) last year specifically for high altitude regions and low-temperature regions such as Ladakh, where ordinary diesel can become unusable.

- It contains additives to maintain lower viscosity can be used in temperatures as low as -30°C and that besides a low pour point, it had higher cetane rating — an indicator is the combustion speed of diesel and compression needed for ignition— and lower sulphur content, which would lead to lower deposits in engines and better performance.

**Captain Arjun**

- Railway Protection Force, Pune (central railway) has launched a Robot ‘CAPTAIN ARJUN’ (Always be Responsible and Just Use to be Nice) to intensify the screening and surveillance.

- It is AI-based robot which conducts thermal screening of passengers, educates them on preventing the COVID-19 spread and displays utmost sensitivity to suspicious and abnormal activity.

- Captain ARJUN also has a sensor-based sanitizer and mask dispenser and can speak in local language.

**RT-nPCR Test**

- Researchers at the Centre for Cellular and Molecular Biology (CCMB) have developed a new low cost and low-tech required test for SARS-CoV-2 testing. This test is known as reverse transcription nested PCR (RT-nPCR) test.

- ICMR has recommended only reverse transcription polymerase chain reaction (RT-qPCR) test for novel coronavirus testing.

- This test does not require real-time quantitative RT-qPCR. The RT-nPCR developed by the CCMB research team has shown comparable performance to the standard RT-qPCR test. The nested PCR (RT-nPCR) approach does not depend on RT-qPCR but uses standard RT-PCR as part of an End point assay.
Researchers at the Indian Institute of Technology Madras have identified a specific microRNA (miRNAs) called ‘miR-155’ that is **over-expressed in tongue cancer**.

The miRNAs affect cancer growth through inhibiting or enhancing the functions of certain proteins. Inhibition of this protein has been known to cause the spread of oral, lung, breast, liver, brain and colon cancers.

MicroRNAs (miRNAs) are **short non-coding RNAs containing 20–24 nucleotides** that participate in virtually all biological pathways in animals. The miRNAs associated with cancer are called ‘Oncomirs’.

**Nature Index 2020**

In the recently-released Nature Index table 2020, **India is placed twelfth globally** in science research output.

The Nature Index is a **database of author affiliation information collated from research articles** published in an independently selected group of 82 high-quality science journals.

The database is **compiled by Nature Research**, a division of the international scientific publishing company Springer Nature that publishes academic journals. Nature Research's flagship publication is Nature, a weekly multidisciplinary journal first published in 1869.

**Axons**

Scientists from Raman Research Institute (RRI), have found out that **spectrin, which are flexible rod-shaped molecules present in axons, act as ‘shock absorbers’** to protect axons from stretch-induced damage.

**Axons are long tubular extensions of nerve cells that transmit electrical signals** across long distances and can be up to a meter long in the case of humans. At such lengths, they are subjected to large stretch deformations during limb or other bodily movements.

The study can help in understanding and treatment of concussion from head injuries as well as stretch-induced nerve injuries.

**Axons vs Dendrite:** An axon is one of two types of cytoplasmic protrusions from the cell body of a neuron; the other type is a dendrite. Dendrites, also dendrons, are branched protoplasmic extensions of a nerve cell that propagate the electrochemical stimulation received from other neural cells to the cell body, or soma, of the neuron from which the dendrites project.

**Light Detection And Ranging (Lidar)**

Equipped with airborne survey data, a team of volunteers in the U.K. analyzed thousands of images derived from LiDAR data.

Lidar, which stands for Light Detection and Ranging, is a **remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth**. These light pulses—combined with other data recorded by the airborne system—generate precise, **three-dimensional information** about the shape of the Earth and its surface characteristics.

A LiDAR instrument principally consists of a laser, a scanner, and a specialized GPS receiver. Airplanes and helicopters are the most commonly used platforms for acquiring lidar data over broad areas.
• Two types of lidar are topographic and bathymetric. Topographic lidar typically uses a near infrared laser to map the land, while bathymetric lidar uses water-penetrating green light to also measure seafloor and riverbed elevations.

Sun’s Coronal Heating
• Scientists have recently discovered tiny flashes of radio light emanating from all over the Sun, which they say could help in explaining the long-pending coronal heating problem.
• These radio lights or signals result from beams of electrons accelerated in the aftermath of a magnetic explosion on the Sun. Magnetic explosions have not been seen but these radio lights are the strongest evidence till date that the tiny magnetic explosions, originally referred to as ‘nanoflares’ can indeed be heating up the corona.
• The solar corona, the outer layer of the Sun’s atmosphere, is composed of extreme high temperature gas, known as plasma, with temperatures reaching millions of degrees Celsius.
• The corona is usually hidden by the bright light of the Sun's surface. That makes it difficult to see without using special instruments. However, the corona can be seen during a total solar eclipse.

Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)
• In a bid to improve the standardization, regulation and quality control of Ayurveda, Siddha, Unani and Homoeopathy drugs, the Union Cabinet has given its approval to re-establish Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H) as Subordinate Office under Ministry of AYUSH.
• It will be done by merging of Pharmacopoeia Laboratory for Indian Medicine (PLIM) and Homoeopathic Pharmacopoeia Laboratory (HPL)- the two central laboratories established at Ghaziabad since 1975.
• Presently, PCIM&H is an autonomous body under Ministry of AYUSH established since 2010. It is also intended to accord legal status to PCIM&H and its laboratory and under Drugs & Cosmetics Rules, 1945.

Quantum Satellite Micius
• Micius, a quantum enabled satellite, has recently sent particles of light to Earth establishing the world’s most secure communication link. It enables first totally secure long range communication.
• Micius is the world’s first quantum communications satellite launched by China in 2016. The satellite serves as the source of pairs of entangled photons, twinned light particles whose properties remain intertwined no matter how far apart they are.
• If one of the photons is manipulated, the other will be similarly affected at the very same moment. It is this property that lies in the heart of the most secure forms of quantum cryptography, the entanglement-based quantum key distribution.
• If you use one of the entangled particles to create a key for encoding messages, only the person with the other particle can decode them. This gives robust, unbreakable cryptographic protection without the need to trust the satellite. Until now, this had never been done via satellite or at such great distances.
NASA announced that a giant asteroid, called 163348 (2002 NN4), is expected to pass Earth (at a safe distance) as a Near Earth Object (NEO) in June.

This asteroid is classified as a Potentially Hazardous Asteroid (PHA), which means it has the potential to make threatening close approaches to the Earth.

NASA defines NEOs as comets and asteroids nudged by the gravitational attraction of nearby planets into orbits which allows them to enter the Earth’s neighbourhood.

NEOs occasionally approach close to the Earth as they orbit the Sun. These objects are composed mostly of water ice with embedded dust particles.

Terminal High Altitude Area Defense (THAAD)

Recently, China has reiterated its long-standing objections to the presence of US THAAD missile defence system in South Korea.

THAAD is a transportable, ground-based missile defense system that intercepts ballistic missiles during their final, or terminal, phase of flight. The system has a track record of 100% mission success in flight testing since 2005.

It uses a one-stage hit-to-kill interceptor to destroy incoming ballistic missile targets, both inside and outside of the Earth’s atmosphere at a range of 200 kilometers.

THAAD is coupled with space-based and ground-based surveillance stations, which transfer data about the incoming missile and inform the THAAD interceptor missile of the threat.

It has been designed and manufactured by the US Company Lockheed Martin. It has been previously deployed in the UAE, Guam, Israel and Romania.

Global Partnership on Artificial Intelligence (GPAI)

India joined GPAI or Gee-Pay as a founding member to support the responsible and human-centric development and use of AI.

GPAI is an international and multi-stakeholder initiative to guide the responsible development and use of AI, grounded in human rights, inclusion, diversity, innovation, and economic growth.

India joined the league of leading economies including USA, UK, EU, Australia, Canada, France, Germany, Italy, Japan, Mexico, New Zealand, Republic of Korea, Singapore to launch the GPAI.

GPAI will be supported by a Secretariat, to be hosted by Organization for Economic Cooperation and Development (OECD) in Paris, as well as by two Centers of Expertise- one each in Montreal and Paris.

MAAREECH

The Indian Navy said it has inducted an advanced anti-torpedo decoy system called ‘Maareech’ that is capable of being fired from all frontline ships.

‘Maareech’ has been designed and developed indigenously by the Defence Research and Development Organization (DRDO) and it is capable of detecting, locating and neutralizing incoming torpedo.

Bharat Electronics Limited, a Defence PSU, would undertake the production of this decoy system.
Ionospheric Irregularities

- A multi-instrument based ionospheric study of space weather storms over India by the Scientists from the Indian Institute of Geomagnetism (IIG) have found that the occurrence of equatorial spread F (ESF) irregularities and GPS scintillations are significantly affected by the geomagnetic storms depending upon the time of the onset of the geomagnetic storm.
- The Equatorial Spread-F (ESF) caused due to the F region plasma irregularities is a complex phenomenon encompassing a wide range of scale sizes of irregularities in electron and ion densities as well as in electric fields.
- They have also found that during geomagnetic storms, partial enhancement in pre reversal enhancement (PRE) (an eastward electric field enhancement before turning the westward near the sunset hours in the equatorial ionosphere) in the zonal eastward electric field occurs during post-sunset resulting in around 30% increase in spread F instead of total inhibition during equinox and winter seasons.

Nanozymes

- A research team at the Indian Institute of Science, Bengaluru has developed nanozymes that destroy the cell membrane of bacteria by directly targeting its phospholipids.
- Nanozymes are nanomaterials that can disintegrate the cell membranes of a range of diseases causing bacteria. It also diminishes their resistance-building capacity.
- Nanozymes developed by them can replace the antibiotics that have become ineffective as several bacteria have developed resistance to them by producing their own enzymes.
- Phospholipids (PL) are a class of lipids that are a major component of all cell membranes. They can form lipid bilayers because of their amphiphilic characteristic.

Extreme Helium Star (EHe)

- A study by the Indian Institute of Astrophysics (IIA) which detected the presence of singly ionised fluorine for the first time in the atmospheres of hot Extreme Helium Stars makes a strong case that the main formation of these objects involves a merger of a carbon-oxygen (CO) and a Helium (He) white dwarf.
- An extreme helium star or EHe is a low-mass supergiant that is almost devoid of hydrogen, the most common chemical element of the universe. There are 21 of them detected so far in our galaxy.
- The origin and evolution of these Hydrogen deficient objects have been shrouded in mystery. Since there are no known conditions where stars devoid of hydrogen can be formed from molecular clouds, it is theorized that they are the product of the mergers of helium-core and carbon-oxygen core white dwarfs.

Serotonin

- Serotonin or 5-hydroxytryptamine (5-HT) is a happy neurotransmitter that is secreted in our brain and it mediates the feeling of happiness, satisfaction, and optimism.
- It is a chemical that has a wide variety of functions in the human body. It is sometimes called the happy chemical, because it contributes to wellbeing and happiness, though its actual biological
function is complex and multifaceted, modulating cognition, reward, learning, memory, and numerous physiological processes such as vomiting and vasoconstriction.

- Ninety percent of the happiness neurotransmitter- serotonin is **secreted in the gut** (the part of the alimentary canal between the stomach and the anus) with the help of gut-friendly bacteria.
- In fact, it is a **part of some anti-depressant medicines** as well. Eating foods that boost serotonin levels is one sure way to click happy feelings.

**Indian National Space Promotion and Authorisation Centre (IN-SPACe)**
- Government has announced a new organisation, IN-SPACe, part of reforms to increase private participation in the space sector.
- IN-SPACe will provide a level playing field for **private companies to use Indian space infrastructure**. This centre will also hand-hold, promote and guide the private industries in space activities through encouraging policies and a friendly regulatory environment.
- IN-SPACe is supposed to be a facilitator, and also a regulator. It will act as an **interface between ISRO and private parties**, and assess how best to utilise India’s space resources and increase space-based activities.

**NASA's Gateway Lunar Orbiting Outpost**
- NASA recently finalized the contract to design the **HAbitation And LOGistics (HALO)** support for the Gateway, which is a part of **NASA’s Artemis program** that aims to send the first woman and the next man to the Moon by 2024.
- Gateway is a **small spaceship that will orbit the Moon**, meant for astronaut missions to the Moon and later, for expeditions to Mars. It will act as a temporary office and living quarters for astronauts, **distanced at about 250,000 miles from Earth**. The spaceship will have living quarters, laboratories for science and research and docking ports for visiting spacecraft.
- Further, astronauts will use the Gateway at least once per year and not stay around the year like they do on the International Space Station (ISS). Compared to the ISS, the Gateway is much smaller (the size of a studio apartment).
- Gateway will act as an airport, where **spacecraft bound for the lunar surface of Mars can refuel or replace parts and resupply things** like food and oxygen, allowing astronauts to take multiple trips to the Lunar surface and exploration of new locations across the Moon.

**Aditya: India’s First Solar Ferry**
- **India’s first solar-powered ferry, Aditya**, is among 12 such ferries that have been shortlisted for the Gustave Trouvé Award. It is the **sole entrant from Asia**.
- **Aditya, largest solar-powered boat in India, operates between Vaikkom and Thavanakkadavu, Kerala.** Operated by the Kerala State Water Transport Department (KSWTD), the vessel was designed and built by Navalt Solar and Electric Boats, Kochi.
- **Gustave Trouvé Award:** Gussies Electric Boat Awards were instituted in memory of Gustave Trouvé, a French electrical engineer and pioneer in electric cars and boats.
National Artificial Intelligence Portal

- India’s National Artificial Intelligence Portal, called www.ai.gov.in, has been **jointly developed by the Ministry of Electronics and IT and IT Industry**.
- The National e-Governance Division of Ministry of Electronics and IT and NASSCOM from the IT industry will jointly run this portal.
- This portal shall work as a **one stop digital platform for AI related developments in India**: sharing of resources such as documents, case studies, research reports, articles, startups, investment funds in AI, resources, companies and educational institutions related to AI in India.

Placebo Effect

- A placebo is anything that **seems to be a "real" medical treatment, but isn't**. It could be a pill, a shot, or some other **type of "fake" treatment**. They **do not contain an active substance meant to affect health**.
- Researchers use placebos during studies to help them understand what effect a new drug or some other treatment might have on a particular condition.
- Sometimes a person can have a response to a placebo. The response can be positive or negative. Research on the placebo effect has **focused on the relationship of mind and body**. If a person expects a pill to do something, then it’s possible that the body’s own chemistry can cause effects similar to what a medication might have caused.

Crypto-jacking

- A cryptocurrency is a digital asset stored on computerized databases. These cryptocurrencies are created through a process called mining. To mine digital coins, miners need to use high-end processors that will consume a lot of electricity.
- Crypto-jacking is what some digital coin miners do to illegally gain access to many computers. The **miners stealthily drop malware in an unsuspecting user's computer**. These malware runs surreptitiously and turns devices into cryptocurrency-mining botnets.
- Unlike most other types of malware, crypto-jacking scripts do not use the victim’s data. But they drain the CPU’s resources, which slows down the system, increases electricity usage, and causes irreparable damage to the hardware.

BeiDou Navigation Satellite System

- China has recently completed its BeiDou Navigation Satellite System (BDS) constellation, which can potentially rival the US Global Positioning System (GPS).
- BeiDou uses a network of satellites and can provide positional **accuracies of under ten metres** (GPS provides positioning accuracies of under 2.2 metres).
- **China initiated BeiDou in 1994** and by 2000, the construction of the BDS-1 was completed to provide navigation services over China. 12 years later, BDS-2 provided services over Asia-Pacific region and now the BDS-3 is completed to provide services worldwide.

Other Navigation Systems

- Global Positioning System (GPS)-USA.
- GLONASS- Russia.
- Galileo- European Union (EU).
- Navigation with Indian Constellation (NavIC)- India.
• BeiDou offers services including accurate positioning, navigation and timing as well as short message communication.

• The 55th and final geostationary satellite in the constellation was launched on June 23, 2020 by Long March-3B carrier rocket.

• The system was named “Beidou” after the Chinese term for the Big Dipper constellation.

Bharat Air Fibre
• Recently, Union Minister of State for HRD, Electronics, Communication, and IT, Govt Of India, inaugurated “Bharat Air Fibre Services” at Akola in Maharashtra.

• The Bharat Air Fibre services are introduced by BSNL as part of digital India initiatives by the Government of India

• It aims at providing Wireless Connectivity in the range of 20 KMs from the BSNL Locations and thus customers at remote places also will be benefitted.

• BSNL provides Bharat Air Fibre connectivity upto 100 Mbps speed. The Bharat Air Fibre services opens new way of fastest Wireless internet connectivity as well Voice services in reasonable cost.

Ammonium Nitrate
• The catastrophic explosion at Beirut port was caused by over 2,700 tonnes of ammonium nitrate kept in storage for over six years.

• In its pure form, ammonium nitrate (NH4NO3) is a white, crystalline chemical which is soluble in water. It is the main ingredient in the manufacture of commercial explosives used in mining and construction.

• Pure ammonium nitrate is not an explosive on its own. It is classified as an oxidiser (Grade 5.1) under the United Nations classification of dangerous goods. If mixed with ingredients like fuel or some other contaminants, or because of some other external factors, it can be very explosive. However, for combinations to explode, triggers like detonators are required.

• In the majority of terror attacks in India, including those in Pulwama, ammonium nitrate has been used along with initiator explosives like RDX.

• Regulations in India: The manufacture, conversion, bagging, import, export, transport, possession for sale or use of ammonium nitrate is covered under The Ammonium Nitrate Rules, 2012. The rules also make storage of ammonium nitrate in large quantities in populated areas illegal in India. For the manufacture of ammonium nitrate, an Industrial licence is required under the Industrial Development and Regulation Act, 1951.

Sputnik V
• Russia has officially become the first country to register the world's first coronavirus vaccine.

• However, the vaccine, named "Sputnik V" in homage to the world's first satellite launched by the Soviet Union, has not yet completed its phase-three trial, which involves wide-scale testing with thousands of participants.

• It is developed by the Gamaleya research institute in coordination with the Russian defence ministry. It is based on a proven vaccine against adenovirus - the common cold.
The vaccine consists of two serotypes of human adenovirus, each carrying an S-antigen of the new coronavirus, which enter human cells and produce an immune response.

It is a so-called viral vector vaccine, meaning it employs another virus to carry the DNA encoding of the needed immune response into cells.

**Aspirin to Prevent Cataract**

Scientists from the Institute of Nano Science & Technology (INST) has developed nanorods from the nonsteroidal anti-inflammatory drug (NSAID) Aspirin, to be an effective non–invasive small molecule-based nanotherapeutics against cataract.

Cataract: It is a major form of blindness that occurs when the structure of crystallin proteins that make up the lens in our eyes deteriorates, causing damaged or disorganised proteins to aggregate and form a milky blue or brown layer, which ultimately affects lens transparency.

Thus, prevention of the formation of these aggregates as well as their destruction in the early stage of disease progression is a major treatment strategy for cataracts, and materials that can carry out this task could make cataract prevention affordable and accessible.

**Time Capsules**

Ahead of the laying of the foundation stone for the Ram temple in Ayodhya, claims and denials have emerged about plans to put in a time capsule, or ‘kaal patra’.

It is a container of any size or shape, which accommodates documents, photos and artefacts typical of the current era and is buried underground, for future generations to unearth.

The time capsule requires special engineering so that the contents don’t decay, even if pulled out after a century. Material such as aluminium and stainless steel are used for the encasing, and documents are often reproduced on acid-free paper.

The International Time Capsule Society (ITCS), based in the US and formed in 1990, is now defunct but continues estimating the number of time capsules in the world. As per its database, there are “10,000-15,000 times capsules worldwide”.

Time capsules in India: One time capsule, outside the Red Fort and placed underground in 1972 by Prime Minister Indira Gandhi. Other time capsules are at a school in Mumbai, IIT-Kanpur, Lovely Professional University in Jalandhar, and Mahatma Mandir in Gandhinagar.

**RaTG13 Sarbecovirus**

Chinese researchers had found that SARS-CoV-2 is most closely related to RaTG13 sarbecovirus, which was isolated from a horseshoe bat in Yunnan province in 2013.

Based on the nearly 96% genome sequence identity between SARS-CoV-2 and RaTG13, an origin in bats is probable for the COVID-19 outbreak.

The authors analysed the evolutionary history of SARS-CoV-2 using genomic data on sarbecoviruses. They employed three approaches to identify regions in the virus that had not undergone recombination and that could be used to reconstruct its evolution. All approaches suggest that RaTG13 and SARS-CoV-2 share a single ancestral lineage and estimate that SARS-CoV-2 genetically diverged from related bat sarbecoviruses in 1948, 1969 and 1982, respectively.
Sunspots

- Recently a massive Sunspot group, AR2770, was observed using images of the Sun’s surface from NASA’s Solar Dynamics Observatory (SDO). A Sunspot is an area on the Sun that appears dark on the surface and is relatively cooler than surrounding parts.
- These spots are the visible markers of the Sun’s magnetic field, which forms a blanket that protects the solar system from harmful cosmic radiation. On the photosphere— the outer surface of the Sun which radiates heat and light— Sunspots are the areas where the star’s magnetic field is the strongest; around 2,500 times more than the Earth’s magnetic field.
- Most Sunspots appear in groups that have their own magnetic field, whose polarity reverses during every solar cycle, which takes around 11 years. In every such cycle, the number of Sunspots increases and decreases.
- Why Sunspots appear dark: Because Sunspots have high magnetic pressures, the atmospheric pressure in the surrounding photosphere reduces, inhibiting the flow of hot gases from inside the Sun to the surface. Due to this, the temperatures of Sunspots are thousands of degrees lower than the surrounding photosphere, which has a temperature of 5,800 degrees Kelvin. Sunspots temperatures are around 3,800 degrees Kelvin. Because they stop the convective flow of heat and light, Sunspots appear dark.
- They typically consist of a dark region called the ‘umbra’, which is surrounded by a lighter region called the ‘penumbra’.

Dilophosaurus

- In the 1993 film Jurassic Park as well as the novel it is based on, one of the dinosaurs depicted is the Dilophosaurus.
- Dilophosaurus lived in what is now North America during the Early Jurassic, about 183 million years ago. The first fossils were discovered in Arizona in the 1940s. The real Dilophosaurus had no neck frills, was a monster at a length of 20 ft, and did not spit venom
- Now, a new comprehensive analysis of Dilophosaurus fossils is helping create a more complete description. Among the new findings, one was that Dilophosaurs had much in common with modern birds. Some bones were mottled with air pockets, which would have helped reinforce the skeleton, including its dual crest.

Elyments App

- Vice President M Venkaiah Naidu launched Elyments app, a new social media platform under Aatmanirbhar Bharat campaign. The app aims to promote Indian brands on the platform, similar to the Facebook marketplace along with Elyments Pay for secure payments.
- The homegrown app has been made keeping in mind Indian audiences as it is available in eight different regional languages. Created by Sumeru Software Solutions, Elyments has basic features of popular social networking apps such as feeds, follow celebrities, athletes, politicians, etc
- Data security has been an issue with various foreign and local apps but Elyments’ creators claim that their data will not be shared with third party without the user’s consent.
CogX 2020

- AI enabled MyGov Corona Helpdesk bagged two awards under categories (1) “Best Innovation for Covid-19 – Society” and (2) “People’s Choice Covid-19 Overall Winner”, at the recently held CogX 2020, which is a prestigious Global Leadership Summit and Festival of AI & Emerging Technology held annually in London.
- MyGov is the world’s largest citizen engagement platform, which facilitates two-way communication between the Government and Citizen and facilitates participatory governance in India. MyGov Corona Helpdesk was developed in partnership with JioHaptik and WhatsApp.
- The Cogx Awards are given out to the best-of-the-best in AI and emerging technologies across the world.

OneWeb

- A U.K. government consortium led by Bharti Enterprises has won the bid to acquire bankrupt satellite technology company OneWeb. Bharti’s overseas arm Bharti Global would invest $500 million as part of the acquisition, with the U.K. putting in a similar amount.
- OneWeb was formed with a mission to offer high speed, low latency wireless broadband access to billions of people across the globe, especially in rural areas through a constellation of satellites in low earth orbit.

Biosafety Levels

- A biosafety level (BSL) is a set of biocontainment precautions required to isolate dangerous biological agents in an enclosed laboratory facility. The levels of containment range from the lowest biosafety level 1 (BSL-1) to the highest at level 4 (BSL-4). Biosafety levels are assigned to a facility depending on the pathogen it deals with.
- Biosafety level 1 (BSL-1) applies to laboratories that work with low-risk microbes that pose little to no threat of infection in healthy adults (eg: non-pathogenic strain of E. coli).
- Biosafety level 2 (BSL-2) covers laboratories that work with agents associated with human diseases (i.e. pathogenic or infectious organisms) that pose a moderate health hazard.(eg. equine encephalitis viruses and HIV).
- Biosafety level 3 (BSL-3) laboratory includes work on microbes that are either indigenous or exotic and can cause serious or potentially lethal disease through inhalation.(eg yellow fever, West Nile virus).
- Biosafety Level 4 (BSL-4) lab consists of work with highly dangerous and exotic microbes. Infections caused by these types of microbes are frequently fatal and come without treatment or vaccines( eg Ebola and Marburg viruses).

Oxford-AstraZeneca Vaccine

- British pharma major AstraZeneca’s experimental Covid-19 vaccine has been found to be safe and has managed to produce a significant immune response in healthy volunteers.
- The vaccine has been called AZD1222 and was under development by AstraZeneca in collaboration with scientists at Britain’s Oxford University.
How It Works

- When someone is infected with the Covid-19 virus (SARS-CoV-2), the reason it spreads in the body easily is because of the spikes on its surface. These spikes, known as the ‘spike protein’, allow the virus to penetrate cells and, thereafter, multiply.

- The vaccine developed by Oxford and AstraZeneca, which belongs to a category called non-replicating viral vector vaccines, tries to build the body’s immunity against this spike protein. The idea is to create antibodies to fight this spiked surface so that the virus does not even have the chance to penetrate the cells.

- The vaccine uses a different virus — in this case, a weakened version of a common cold virus (adenovirus) that infects chimpanzees — to carry just the code to make the spike protein, like a Trojan horse. The adenovirus, genetically modified so that it cannot replicate in humans, will enter the cell and release the code to make only the spike protein. The body’s immune system is expected to recognise the spike protein as a potentially harmful foreign substance, and starts building antibodies against it. Once immunity is built, the antibodies will attack the real virus if it tries to infect the body.

ZyCov-D

- Biotechnology Research Assistance Council (BIRAC) has announced the initiation of Phase I/II clinical trials of ZyCoV-D, the plasmid DNA vaccine designed and developed by Zydus and partially funded by the Department of Biotechnology (DBT), in healthy subjects.

- It is the first indigenously developed vaccine for COVID-19 to be administered in humans in India.

- The vaccine has been developed as part of the accelerated vaccine development programme, announced in February 2020 for COVID-19, under the National Biopharma Mission.

Additional Information: National Biopharma Mission is the Industry-Academia collaborative Mission of DBT in collaboration with the World Bank for accelerating discovery research to early development for biopharmaceuticals. The mission, approved in 2017 at a total cost of Rs 1500 crore, is 50% co-funded by World Bank loan and is being implemented by the BIRAC. Under this Mission, the Government has launched Innovate in India (i3) programme to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the sector.

PLPro Proteins

- A new study has found that pharmacological inhibition of PLpro blocks virus replication and also strengthens our immune response.

- When the coronavirus SARS-CoV-2 enters a human cell, it hijacks the cell mechanism. One of its proteins, called PLpro, is produced by the human cell itself after the virus hijacks the cell mechanism. PLpro is essential for replication of the virus.

- When SARS-CoV-2 infects us, the infected body cells release messenger substances known as type 1 interferons. These attract our killer cells, which kill the infected cells. SARS-CoV-2 fights back by letting the human cell produce PLpro. This protein suppresses the development of type 1 interferons, which would have attracted our killer cells.

- Researchers have now been able to monitor these processes in cell culture. If they blocked PLpro, virus production was inhibited, and the innate immune response of the human cells was also strengthened.
Volcanoes Discovered On Venus

- Scientists have discovered as many as 37 volcanic structures on Venus that appear to be still active today. This discovery has refuted the fact that Venus is a dormant planet.
- According to the researchers, the focus of the study was ring-like structures called coronae that are caused by an upwelling of hot rock from deep within the planet's interior and provided compelling evidence of widespread recent tectonic and magma activity on Venus' surface.
- Earlier it was believed that since Venus lacks the plate tectonic that gradually reshape Earth's surface, it was dormant geologically and have been so for the past half billion years.

Lyfas

- A Bangalore based startup has introduced a mobile app for detection and risk assessment of Covid-19 infected individuals. This technology will detect the possible infection in asymptomatic individuals and carry out a risk assessment with the use of smartphone processors and sensors which will capture a bunch of body signals.
- The Department of Science and Technology has selected Acculi Labs to develop a Covid risk assessment profile called Lyfas COVID score under the Centre for Augmenting WAR with COVID-19 Health Crisis, KAWACH initiative.
- Lyfas is an android application in which, when any person keeps the index finger on the rear phone camera of a mobile phone for five minutes, it captures the capillary pulse and blood volume change.

Latency of the SARS-CoV-2 Virus

- Ever since cases of ‘reinfection’ (people who had tested negative for COVID-19 testing positive again after a while) emerged in early January, the question of latency of the SARS-CoV-2 virus is being hotly debated.
- What is a latent viral infection: A latent viral infection is an infection that is inactive or dormant. It however possesses the capacity to be reactivated at some point, causing a flare-up of the disease much later.
- As opposed to active infections, latent infections are essentially static which last the life of the host and occur when the primary infection is not cleared by the adaptive immune response. Examples are Herpes simplex viruses type 1 and 2, varicella-zoster virus, HIV, Epstein-Barr virus (human herpesvirus 4), and cytomegalovirus.
- Latent viral infections can be reactivated into a lytic form (the replication of a viral genome). The ability to move back and forth from latent to lytic infections helps the virus spread from infected individuals to uninfected individuals.

N-95 Valved Respirator/Masks

- The Union Health Ministry cautioned against the use of N-95 valve respirator/ masks, stating that it doesn’t offer the desired protection against the spread of COVID-19.
- N95 masks filter about 95 percent of particles smaller than 300 nanometres. SARS-CoV-2, the virus that causes Covid-19, however, is in the size range of 65-125 nm. The valve or the raised plastic gasket found in some N95 mask models basically filters the air inhaled by the person and blocks the entry of pathogens suspended in the air.
• The valves allow easier exhalation than traditional masks, prevent humidity, reduce heat and carbon dioxide build-up inside the mask. However, concerns are raised as the valve is basically a ‘one-way valve’ that only protects the person wearing it and doesn’t filter the aerosols coming out. Hence, an asymptomatic carrier of the coronavirus can easily spread the infection to others.

**ANASIS-II**

• South Korea’s first-ever military communications satellite has been successfully launched by private operator SpaceX.
• The ANASIS-II is intended to enhance the South’s ability to defend itself against the nuclear-armed North, which invaded in 1950.
• The launch made South Korea the 10th country in the world to own a military-only communications satellite, which will provide "permanent and secured military communications”.

**human Growth Hormone (hGH)**

• In a first-of-its-kind case, a 2018 Commonwealth Games silver medallist and reigning national champion weightlifter has tested positive for human Growth Hormone (hGH).
• Human Growth Hormone (hGH) is a hormone that is naturally produced in the body and secreted by the pituitary gland near the base of the brain.
• hGH increases lean body mass and decreases total body fat and also helps in repairing tissues quicker and is used along with other performance-enhancing drugs for better results.
• hGH is known to increase muscle mass, strength as well as tissue-repairing effects, which has been used as a doping agent in power and endurance sports. hGH is banned both in-competition as well as out-of-competition. One of the ways to check is to track protein levels found in blood plasma.

**AJO-Neo**

• Scientists from the S.N. Bose National Centre For Basic Sciences (SNBNCBS), Kolkata have developed a device called “AJO-Neo" to measure neonatal bilirubin level.
• It is a non-contact and non-invasive spectrometry-based technique for measurement of neonatal bilirubin level without limitations of other available bilirubin meters.

**Additional Information:** Bilirubin is a yellowish substance in our blood. It forms after red blood cells break down, and it travels through our liver, gallbladder, and digestive tract before being excreted. It is excreted in bile and urine, and elevated levels may indicate certain diseases. It is responsible for the yellow colour of bruises and the yellow discoloration in jaundice. Normal levels of bilirubin in blood are below 1.0 mg/dL, while levels over 2–3 mg/dL (34–51 μmol/L) is called hyperbilirubinemia that typically results in jaundice (also known as icterus).

**Solar Orbiter Mission**

• Recently the Solar Orbiter Mission has delivered the closest photos ever taken of the sun's surface. It has revealed a landscape rife with thousands of tiny solar flares that scientists dubbed “campfires”.
• The Solar Orbiter Mission, is a collaborative mission between the European Space Agency and NASA to study the Sun. The mission, on an Atlas V rocket, will face the sun at approximately 42
In 1990, NASA and ESA had sent the *Ulysses mission*, which also passed over the sun’s poles but at much farther distances, and did not carry a camera.

- Solar Orbiter is on a unique trajectory that will allow its comprehensive set of instruments to provide humanity with the first-ever images of the Sun’s poles.

### Dare to Dream 2.0

- Defence Research and Development Organisation (DRDO) has launched its innovation contest ‘Dare to Dream 2.0’ on the 5th death anniversary of former President and noted scientist Dr APJ Abdul Kalam.

- It is an open challenge scheme to promote the Indian innovators and startups for innovations in defence and aerospace technologies.

### “Mausam” Mobile App

- The Ministry of Earth Sciences India has launched a new mobile application called "Mausam" for the Indian Meteorological Department (IMD) which will help users track weather updates and also bring in the enhanced forecast as well as warning services from the government.

- It will provide current weather information, including temperature, humidity, wind speed and direction, for 200 cities. Other than weather forecasts, users can access radar images and be warned of impending weather events.

- The app was designed and developed in a joint effort made by ICRISAT’s Digital Agriculture and Youth team, Indian Institute of Tropical Meteorology (IITM) in Pune, and IMD.

### 5G

- Reliance Industries announced that the company’s telecom venture Jio has designed and developed from scratch, a complete indigenous 5G solution ready for deployment.

- 5G or fifth generation is the **latest upgrade in the long term evolution (LTE) mobile broadband networks**. The first generation of networks allowed only mobile voice calls to be made, while the second generation allowed mobile voice calls as well as sending of short text messages. It was the third generation or 3G network which allowed web browsing on mobile devices, the speed and latency of which improved with fourth generation or 4G networks.

- 5G speeds will range from ~50 Mbit/s to over a gigabit/s with **latency down to between 1-10 milliseconds**. Latency is the time a device takes to communicate with the network, which stands at an average of up to 50 milliseconds for 4G networks across the world.

- The main advantage of the new networks is that they will **have greater bandwidth, giving higher download speeds, eventually up to 10 gigabits per second (Gbit/s)**.

### Common Services Centre (CSC) WiFi Choupal

- Starting from 10th June, the Common Services Centre (CSC) WiFi Choupal has provided 1 Lakh FTTH broadband connections to rural areas in 40 days.

- In early 2016, CSC Wi-Fi Choupal Service India Pvt. Ltd was introduced for development of **affordable and reliable ICT solutions in the rural areas**. The initiative focuses on enhancement of Internet connectivity at the last mile leveraging of BharatNet infrastructure.
• It is an Initiative of ‘CSC e-Governance Services India Limited’, a Special Purpose Vehicle (SPV) set up in 2016 by the Ministry of Electronics & IT under the Companies Act, 1956 to oversee implementation of the Common Service Centres (CSC) scheme.

• Fiber To The home (FTTH) is the installation and use of optical fiber from a central point directly to individual buildings such as residences, apartment buildings and businesses to provide high-speed Internet access.

Kakrapar-3

• The third unit of the Kakrapar Atomic Power Project (KAPP-3) in Gujarat achieved its first criticality - a term that signifies the initiation of a controlled but sustained nuclear fission reaction.

• KAPP-3 is the country’s first 700 MWe (megawatt electric) unit, and the biggest indigenously developed variant of the Pressurised Heavy Water Reactor (PHWR).

• The PHWRs, which use natural uranium as fuel and heavy water as moderator, are the mainstay of India’s nuclear reactor fleet. Until now, the biggest reactor size of indigenous design was the 540 MWe PHWR, two of which have been deployed in Tarapur, Maharashtra

• The first two units at Kakrapar of 220 MWe (Megawatt electric) each were based on Canadian technology. The third unit is fully indigenous.

International Thermonuclear Experimental Reactor (ITER)

• ITER is an international nuclear fusion research and engineering megaproject, which will be the world’s largest magnetic confinement plasma physics experiment. It is an experimental tokamak nuclear fusion reactor that is being built in France.

• It has been designed to create a plasma of 500 megawatts (thermal) for around twenty minutes while 50 megawatts of thermal power are injected into the tokamak, resulting in a ten-fold gain of plasma heating power. Thereby the machine aims to demonstrate, for the first time in a fusion reactor, the principle of producing more thermal power than is used to heat the plasma.

• The project is funded and run by seven member entities—the European Union, China, India, Japan, Russia, South Korea and the United States.

• Construction of the ITER tokamak complex started in 2013 and the US Department of Energy has estimated the total construction costs by 2025 to be $65 billion.

Phobos- The Biggest Moon Of Mars

• The Mars Colour Camera (MCC) onboard ISRO's Mars Orbiter Mission has captured the image of Phobos, the closest and biggest moon of Mars.

• Phobos is largely believed to be made up of carbonaceous chondrites.

• Stickney, the largest crater on Phobos along with the other craters (Shklovsky, Roche & Grildrig) are also seen in this image.

G4 Flu Virus

• In a new research, scientists from China – which has the largest population of pigs in the world – have identified a “recently emerged” strain of influenza virus that is infecting Chinese pigs and that has the potential of triggering a pandemic.
Named G4, the swine flu strain has genes similar to those in the virus that caused the 2009 flu pandemic. They also found that the G4 strain has the capability of binding to human-type receptors (like, the SARS-CoV-2 virus binds to ACE2 receptors in humans), was able to copy itself in human airway epithelial cells, and it showed effective infectivity and aerosol transmission in ferrets.

Rosalind Franklin
- The 100th birth anniversary of Rosalind Franklin was observed on 25th July.
- Rosalind Elsie Franklin was an English chemist and X-ray crystallographer whose work was central to the understanding of the molecular structures of DNA, RNA, viruses, coal, and graphite.
- She is best known for her work on the X-ray diffraction images of DNA, particularly Photo 51, which led to the discovery of the DNA double helix for which James Watson, Francis Crick and Maurice Wilkins shared the Nobel Prize in Physiology or Medicine in 1962.

SFTS Virus
- A disease called Severe Fever with Thrombocytopenia Syndrome (SFTS), has killed seven and infected at least 60 in China.
- SFTS virus belongs to the Bunyavirus family and is transmitted to humans through tick bites. The virus was first identified by a team of researchers in China over a decade ago.
- Due to the rate at which it spreads and its high fatality rate, SFTS has been listed among the top 10 priority diseases blue print by the World Health Organisation (WHO).
- Scientists have found that the virus is often transmitted to humans from animals like goats, cattle, deer and sheep. Despite being infected by the virus, animals generally do not show any symptoms associated with SFTSV. The risk factors observed in more serious cases include multi-organ failure, hemorrhagic manifestation and the appearance of central nervous system (CNS) symptoms.

SN5 Starship Prototype
- A prototype of the SpaceX’s uncrewed “Mars ship”, a stainless steel test vehicle called SN5, and which is a part of the Starship spacecraft, successfully flew to an altitude of over 500 feet for a little less than 60 seconds.
- Designed by SpaceX, Starship is a spacecraft and super-heavy booster rocket meant to act as a reusable transportation system for crew and cargo to the Earth’s orbit, Moon and Mars. SpaceX has described Starship as “the world’s most powerful launch vehicle” with an ability to carry over 100 metric tonnes to the Earth’s orbit.
- Starship has been under development since 2012 and is a part of Space X’s central mission to make interplanetary travel accessible and affordable and to become the first private company to do so. Once functional, the Starship spacecraft will enter Mars’ atmosphere at a speed of 7.5 km per second and will be designed to withstand multiple entries.

India’s First Private Upper Stage Rocket Engine
- Aerospace startup Skyroot Aerospace has successfully test fired an upper-stage rocket engine, becoming the first Indian private company to demonstrate the capability to build a homegrown rocket engine.
• **The 3-D printed rocket engine** – Raman, named after Nobel laureate CV Raman – has fewer moving parts and weighs less than half of conventional rocket engines with a similar capacity.

• It is **India’s first 100% 3D-printed bi-propellant liquid rocket engine injector**. Compared to traditional manufacturing, this reduced the overall mass by 50%, reduced the total number of components and lead time by 80%.

**Tabletop Runways**

• **Kozhikode Air India plane crash** has put the focus on tabletop runways again.

• Tabletop runways are generally **constructed by chopping off the top of a hill**, and are often thought of as tricky for landings because of the lack of any margin for overshooting the runway.

• According to pilots, landing on tabletop runways requires **precision approach** with little to no room for errors.

**Miscellaneous News Related To Covid**

• **ANANYA**: Defence Institute of Advanced Technology, Pune has developed a **Nano-technology based disinfectant spray (water-based)**, named “ANANYA”, to combat COVID-19 for disinfecting all types of surfaces.

• **COVID BEEP**: Government of India launched **COVID BEEP (Continuous Oxygenation & Vital Information Detection Biomed ECIL ESIC Pod)**. It is India’s **first indigenous, cost effective, wireless physiological parameters** monitoring system for COVID-19 patients.

• **Arsenicum Album 30**: It is a homoeopathic drug that has been listed among “preventive and prophylactic simple remedies” against Covid-19 by the Ministry of AYUSH.

• **ARPIT**: The Indian Air Force has designed, developed and inducted an **Airborne Rescue Pod for Isolated Transportation (ARPIT)**. This pod will be utilised for evacuation of critical patients from high altitude areas, isolated and remote places.

• **Navigating the New Normal’ Campaign**: It is a behaviour change campaign **launched by NITI Aayog** partnership with Bill and Melinda Gates Foundation (BMGF), Centre for Social and Behavioural Change (CSBC), Ashoka University, and the Ministries of Health and Women and Child Development. The campaign focuses on Covid-safe behaviours, especially wearing masks, during the ‘Unlock’ phase of the ongoing pandemic.

• **Project Platina**: Maharashtra has launches Project Platina, ‘world's largest' plasma therapy trial for COVID-19 patients. Funding to support this plasma therapy trial has been done through the CM Relief fund.

• **Plasma bank**: The Delhi government will set up a first-of-its-kind plasma bank in the Capital. A plasma bank **functions like a blood bank**, and has been created specifically for those who are suffering from Covid-19, and have been advised the therapy by doctors.

• **Covaxin**: It is a vaccine candidate developed by Bharat Biotech India (BBIL) against the novel coronavirus in collaboration with the ICMR’s National Institute of Virology (NIV). It is the first indigenously developed Covid-19 vaccine candidate to receive approval to conduct human clinical trials.

• **FabiFlu**: Glenmark Pharmaceuticals Limited has announced the introduction of Favipiravir under the brand name FabiFlu in tablet form for the treatment of mild & moderate COVID-19 cases.
• **Covifor**: Drugmaker Hetero has received the Drug Controller-General of India (DCGI) approval to manufacture and sell its generic version of Gilead's Remdesivir, under the brand name ‘Covifor’ in India, for the treatment of COVID-19 patients in the country.

• **Umifenovir**: This drug has a good safety profile and acts by preventing entry of viruses into human cells and also by priming the immune system. Umifenovir is mainly used for treatment of influenza and is available in China and Russia, and has recently come into prominence due to its potential use for Covid19 patients.

• **Dexamethasone**: It is a cheap, widely available steroid being used in England to improve COVID-19 survival and can reduce deaths by up to one third in severely ill hospitalised patients. However, WHO advises against using steroids earlier in the course of illness because they can slow the time until patients clear the virus.

• **HAM Radio**: Currently, HAM (amateur) radio operators are helping the task force in Bengaluru to ensure that citizens placed under home quarantine amid COVID-19 follow the protocol for it. HAM radio is a real-time communication network.

• **SHUDDH**: IIT Kanpur develops UV sanitizing device ‘SHUDDH’ *(Smartphone operated Handy Ultraviolet Disinfection Helper)* to make a room COVID free.

• **RCF SAFEROLA**: Rashtriya Chemicals and Fertilizers Limited (RCF), a PSU under the Ministry of Chemicals and Fertilizers, has introduced a Hand Cleansing IPA Gel ‘RCF SAFEROLA’.

• **Itolizumab** is another drug to be approved by Drug Controller General of India (DCGI) for “restricted emergency use” to treat Covid-19 patients. It is used for skin disorder psoriasis, rheumatoid arthritis, multiple sclerosis, and autoimmune disorders. **Itolizumab is a monoclonal antibody** which is used to treat acute psoriasis.

• **Corona Kavach**: The IRDAI has allowed 30 general and health insurers to launch short-term ‘Corona Kavach’ health insurance policies for persons between the age of 18 to 65 years to cover medical expenses incurred due to coronavirus disease. The sum insured amount of the policy ranges between Rs. 50,000 to Rs. 5 Lakh. The policy shall also cover prehospitalisation expenses for 15 days and post hospitalisation expenses of 30 days.

• **Compact XL**: Pune-based molecular diagnostics company, Mylab Discovery Solutions, has launched ‘Compact XL’ - **India’s first machine to automate the manual processes of molecular diagnostic tests** such as RT-PCR tests for Covid-19. Compact XL is a compact bench-top machine that will automate lab processes from sample handling to preparing RT-PCR ready tubes.

• **Drug Discovery Hackathon 2020**: It was launched by the Union Minister for Human Resource Development and Union Minister for Health and Family Welfare. This Drug Discovery Hackathon is a joint initiative of MHRD, All India Council for Technical Education (AICTE) and the Council of Scientific and Industrial Research (CSIR) and supported by partners like Centre for Development of Advanced Computing (CDAC), MyGov, Schrodinger and ChemAxon. The objective is to identify drug candidates against SARS-CoV-2 by in-silico drug discovery through the hackathon and follow up by chemical synthesis and biological testing. In-silico drug discovery utilizes computational methods such as machine learning, AI and big data which will help in accelerating this process.

• **MegaLab**: the **world’s largest genetic testing lab** being built by the IIT Alumni Council, announced a Rs 500-crore incubator to intensify offensive against Covid in the Mumbai University campus. ‘MegaLab Mumbai’ will start operations from July 2020. The MegalIncubator will be the world’s first and largest engineered bio-molecule focused incubator to involve start-ups, other existing incubators and accelerators.
• **MediCAB**: A start-up incubated in the Indian Institute of Technology (IIT), Madras, has developed a portable hospital that can be used to screen, isolate and treat COVID-19 patients even in remote locations.

• **Corosure**: ICMR approves IIT-Delhi’s low-cost RT-PCR based COVID-19 test kit Corosure. It will cost Rs 650 and delivers results in three hours.

• **Manodaran Initiative**: With an aim to provide psycho-social support and counselling to students for their mental health and well-being, the Ministry of Human Resource Development has launched the Manodaran initiative, under the Atmanirbhar Bharat Abhiyan. Under the initiative, a toll-free national helpline number, a website of Manodaran and a handbook on 21st century life skills, for students has been launched.

• **A3i**: Scientists have identified a new coronavirus type, A3i, that may be the second most prevalent in India and may comprise 3.5% of the genomes globally. The most dominant coronavirus clade in India is the A2a.

• **Ultra Swachh**: Defence Research and Development Organisation (DRDO) has developed a disinfection unit named Ultra Swachh to disinfect a wide range of materials, including Personal Protective Equipment (PPEs), electronics items, fabrics, etc. The system uses an advanced oxidative process consisting of multiple barrier disruption approaches using Ozonated Space Technology for disinfection.

• **Arogyapath Portal**: Council of Scientific and Industrial Research (CSIR) has launched a national healthcare supply chain portal, called Arogyapath Portal, that aims to provide real-time availability of critical healthcare supplies to manufacturers, suppliers, and customers to effectively deal with the Covid-19 pandemic.

• **Kill Corona**: Madhya Pradesh launched a 15-day state-wide “Kill Corona” programme from 1 July. The programme includes door to door surveys in urban slums and low-income households having high population density and poor municipal management as a majority of positive cases have been reported from these areas.

• **Corona Case Positivity** is the ratio of the number of positive cases in a particular area to the total number of people tested in that particular area.

• **Prana-Vayu**: IIT-Roorkee has developed a low-cost portable ventilator, named Prana-Vayu, in association with AIIMS-Rishikesh, which can be manufactured for just ₹25,000.

• **Ruhdaar**: IIT Bombay students develop low-cost mechanical ventilator Ruhdaar.

• **Project Praana (Sanskrit/Kannada for “breath/life”)** is a voluntary prototype ventilator design effort run by a group of engineers primarily associated with Indian Institute of Science (IISc). It is an open-source basis in which the design and specifications can be freely shared with as many manufacturers in India as possible. It aims to use components available in India to build a mechanical ventilator, whose production can be rapidly scaled up.

• **Jeevan**: The Railways’ Rail Coach Factory (RCF) in Kapurthala (Punjab) came out with a prototype ventilator, named Jeevan, which has an original design and will cost a fraction of what regular ventilators cost.

• **Kerala** was one of the first States to use geo-fencing to track COVID-19 cases.

• **Andaman and Nicobar** became the first to conduct pool tests in the country.
World Environment Day 2020

- The World Environment Day is celebrated on the 5th of June every year for encouraging worldwide awareness and action to protect our environment.
- This year, the day was hosted in Colombia in partnership with Germany. India hosted in 2018.
- The day was first designed by the United Nations in 1972 during the United Nations Conference on Human Environment. However, it was first celebrated in 1974.
- Theme 2020: 'Biodiversity'.
- India will be focusing on the Nagar Van (Urban Forests) in addition to the official theme of the World Environment Day.
- The Chief Minister of West Bengal highlighted that about 28% of the Sunderbans has been damaged by Cyclone Amphan and launched a drive for planting mangroves and trees to mark the World Environment Day.
  - The Indian Sundarbans, an area south of the Dampier Hodges line, is spread over 9,630 sq km, of which the mangrove forest accounts for 4,263 sq km.
  - Dampier Hodges line is an imaginary line, passing through 24 Parganas South and North districts (West Bengal) which indicates the northern-most limits of the estuarine zone affected by tidal fluctuations.
  - The CM has told the Forest Department to prepare a plan to plant 3.5 crore mangroves by 14th July (celebrated as the World Forest Day).

Sundarbans

- It is a vast contiguous mangrove forest ecosystem in the coastal region of Bay of Bengal spread over India and Bangladesh on the delta of the Ganges, Brahmaputra and Meghna rivers. It spans from the Hooghly River in India’s state of West Bengal to the Baleswar River in Bangladesh.
- It constitutes over 60% of the country’s total mangrove forest area.
- Indian Sundarbans was recognised as UNESCO World Heritage Site in 1987, ‘Wetland of International Importance’ under the Ramsar Convention in January 2019 and also a Biosphere Reserve in 1989.
- The Sunderbans Delta is the only mangrove forest in the world inhabited by tigers.
- Sajnekhali Bird Sanctuary is a part of Sundarban and is famous for the sight of rare birds.

Mangrove

- A mangrove is a shrub or small tree that grows in coastal saline or brackish water.
- The term is also used for tropical coastal vegetation consisting of such species.
- Mangroves occur worldwide in the tropics and subtropics, mainly between latitudes 25° N & 25°S.
● In India, West Bengal has the highest percentage of area under total Mangrove cover followed by Gujarat and Andaman and Nicobar Islands.

Nagar Van Scheme
● On the occasion of World Environment Day, the government announced implementation of the Nagar van scheme to develop 200 Urban Forests across the country in next five years with a renewed focus on people’s participation and collaboration between the Forest Department, Municipal bodies, NGOs, Corporates and local citizens.
● The Ministry of Environment, Forest and Climate Change (MoEFCC) has also released a brochure on the best practices on Urban Forests.
● The Warje Urban Forest (Pune, Maharashtra) will be a role model for the rest of the country.
● The finances for the scheme will be paid for by the CAMPA (Compensatory Afforestation Fund (CAF) Act, 2016) funds.

iCommit Initiative
● The ‘#iCommit’ initiative was launched on World Environment Day.
● The initiative, driven by Energy Efficiency Services Limited (EESL), under the administration of the Ministry of Power, Government of India is uniting a diverse set of players such as Governments, Corporates, Multilateral and Bilateral Organisations, Think Tanks and Individuals.
● The initiative is a clarion call to all stakeholders and individuals to continue moving towards energy efficiency, renewable energy, and sustainability to create a robust and resilient energy system in the future.

Healthy and Energy Efficient Buildings
● On occasion of World Environment Day, Energy Efficiency Services Limited (EESL) in partnership with the U.S. Agency for International Development’s (USAID) MAITREE program, launched the “Healthy and Energy Efficient Buildings” initiative that will pioneer ways to make workplaces healthier and greener.
● This initiative is addressing the challenges of retrofitting existing buildings and air conditioning systems so that they are both healthy and energy efficient.
● As part of this Initiative, EESL has taken the leadership by being the first to implement this framework in its own offices.

Biggest Biodiversity Park in Uttarakhand
● Uttarakhand opened its first and biggest biodiversity park in Haldwani on the World Environment Day.
● Inside the Park, there are thematic gardens, a soil museum, species of plants, lichens, mosses and algae from the Jurassic era, a vermicompost unit, an interpretation centre, and a state-of-the-art weather station.
● The various species of plants have been brought to the park from diverse terrains like Niti Mana Valley (located near the India Tibetan Border in Chamoli district of Uttarakhand) and even from some glaciers around Kedarnath.
India’s First Online Waste Exchange Platform

- The Andhra Pradesh government launched the first online waste exchange programme on the occasion of World Environment Day. The programme was launched for safe disposal of toxic wastes and promote recycling and reuse of toxic wastes.
- It will help the authorities monitor the movement of hazardous waste real-time using the tools incorporated in the platform.
- The platform will track, scrutinise and audit the waste besides encouraging proper utilisation of waste and promoting 6Rs -- reduce, reuse, recycle, refurbish, redesign and re-manufacturing of waste items.

Environmental Performance Index (EPI Index 2020)

- India secured 168 rank (scored 27.6 out of 100) in EPI Index 2020 among 180 countries. India’s rank was 177 (with a score of 30.57 out of 100) in 2018.
- Denmark topped the index with a score of 82.5.
- India’s performance was worse than all South Asian countries, except Afghanistan.
- India scored below the regional (South-Asia) average score on all five key parameters on environmental health, including air quality, sanitation and drinking water, heavy metals and waste management.
- It has also scored below the regional average on parameters related to biodiversity and ecosystem services too.
- These findings resonated with the concerns raised by the ‘State of India’s Environment 2020 in Figures’, published by the Centre for Science and Environment.

Environmental Performance Index

- It is released biennially (in Two years) by Yale University and Columbia University in collaboration with the World Economic Forum.
- The global index considered 32 indicators of environmental performance, giving a snapshot of the 10-year trends in environmental performance at the national and global levels.
- This index was first published in 2002 designed to supplement the environmental targets set forth in the United Nations Millennium Development Goals.

Scorpionfish

- Researchers at the Central Marine Fisheries Research Institute (CMFRI) have found a rare fish, Scorionfish, in the Gulf of Mannar.
- This is the first time that it is found alive in Indian waters.
- It is well-known for its stinging venomous spines and ability to change colour.
- Unlike other fish, this band-tail Scorpion fish uses its lateral sensory system (detect movement, vibration, and pressure gradients in the surrounding water) instead of eyes to hunt its prey.
Gulf of Mannar

- The Gulf of Mannar is a large shallow bay forming part of the Laccadive Sea in the Indian Ocean.
- It lies between the west coast of Sri Lanka and the southeastern tip of India, in the Coromandel Coast region.
- Islands: Pamban Island, Mannar Island, Adam's Bridge (Rama’s Bridge).

Asiatic Lions

- Population of the majestic Asiatic Lion, living in Gujarat’s Gir Forest, has increased (from 523 in 2015 to 674 lions in recent count, up by almost 29%). The lion population in the state of Gujarat has doubled since 2001.
- The geographical distribution area for Gir forests’s lions has been increased by 36% (from 22,000 sq. km in 2015 to 30,000 sq. km in 2020).
- The count was estimated from a population observation exercise called Poonam Avlokan in place of the 15th Lion Census.
- Poonam Avlokan is a monthly in-house exercise carried out every full moon. It was a mechanism developed by the Forest Department in 2014 as part of preparations for the 2015 Lion Census.
- Protection Status:
  - IUCN Red List: Endangered
  - CITES: Appendix I
  - Wildlife (Protection) Act 1972: Schedule I

Gir National Park

- It is the only natural habitat of Asiatic lions situated in Junagadh district of Gujarat.
- It was declared as a sanctuary in 1965 and a national park in 1975.
- Gir is often linked with "Maldharis" who have survived through the ages by having a symbiotic relationship with the lions.
- Maldharis are religious pastoral communities living in Gir. Their settlements are called "nesses".

Indian Gaur

- The first population estimation exercise of the Indian Gaur (Bison) was carried out in the Nilgiris Forest Division, Tamil Nadu.
- It has revealed that more than an estimated 2,000 Indian gaurs inhabit the entire division, with an average of eight individuals per square kilometre.
- Worldwide Fund for Nature-India assisted the Department during the exercise.
- It is found in some of the famous national parks of India like Nagarhole (also known as Rajiv Gandhi National Park, situated in Karnataka), Bandipur (Karnataka), Kabini (Karnataka) and Masinagudi (part of Mudumalai National Park in Tamil Nadu).
Malabar Gliding Frog

- A rare amphibian Malabar Gliding Frog was spotted in Pullad, Kerala. It is endemic to the rainforest of western ghats.
- It is a green frog with slender body, webbed feet, unusual body positions, very well camouflaged and gliding in the air.
- It can glide in the air up to 10 to 12 metres.
- The frog has got a body length of 10 cm, making it one of the largest mossy frogs. The fingers and toes are like sticks to attach and walk through tree branches. Males are smaller than females.
- Mossy Frogs: These frogs have the skin which is green in colour and resembles moss growing on the rock.
- They built foam nests above small pools of water, into which the tadpoles drop after hatching.
- Protection Status: IUCN Red List: Least Concern

World Crocodile Day

June 17 is celebrated as World Crocodile day. It is a global awareness campaign to highlight the plight of endangered crocodiles and alligators around the world. India is home to three crocodilian species:

1. Mugger or marsh crocodile
   - They are broad-nosed crocodile and mugger, is a crocodilian native to freshwater habitats from southern Iran to the Indian subcontinent.
   - It is extinct in Bhutan and Myanmar.
   - The mugger is known to be dangerous.

   Protection Status:
   - IUCN List of Threatened Species: Vulnerable
   - CITES : Appendix I
   - Wildlife Protection Act, 1972 : Schedule I

2. Estuarine or saltwater crocodile
   - It is native to saltwater habitats and brackish wetlands from India’s east coast across Southeast Asia and the Sundaic region to northern Australia and Micronesia.
   - In India, it is found in Odisha’s Bhitarkanika National Park, the Sundarbans in West Bengal and the Andamans and Nicobar Islands.
- It is the largest living reptile and also known as the estuarine crocodile, Indo-Pacific crocodile, marine crocodile, sea crocodile or informally as saltie.
- The estuarine crocodile is infamous globally as a known maneater.

### Protection Status:
- IUCN List of Threatened Species: Vulnerable
- CITES: Appendix I for all wild populations (Appendix II for those of Australia, Indonesia and Papua New Guinea)
- Wildlife Protection Act, 1972: Schedule I

3. **Gharial**
- It is also known as the gavial or the fish-eating crocodile and is among the longest of all living crocodilians.
- They have a distinct boss at the end of the snout, which resembles an earthenware pot known as a ghara, hence the name "gharial".
- The gharial is found mostly in Himalayan rivers. The population of Garhials are a good indicator of clean river water.
- The gharial is known to be a relatively harmless, fish-eating species.

### Protection Status:
- IUCN List: Critically Endangered
- CITES: Appendix I
- Wildlife Protection Act, 1972: Schedule I

#### Uttar Pradesh has released Garhials (Gavialis gangeticus) in the Ghagha river for the conservation and protection in natural habitat.
- The National Chambal Sanctuary is located along river Chambal on the tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh. It is known for critically endangered gharials, the red-crowned roof turtle, and the endangered Ganges river dolphin.
- Unlike Crocodiles, Garhials are very shy and unhararmful species.

### International Horseshoe Crab Day
The International Union for Conservation of Nature (IUCN)'s Horseshoe Crab Specialist Group had decided to observe the International Horseshoe Crab Day in its meeting from June 14-20, 2019 at Qinzhou City in China. First-ever such celebration happened on June 20, 2020.

### Horseshoe Crab
- Horseshoe crabs are marine and brackish water arthropods of the family Limulidae.
- Their popular name is a misnomer, as they are not crustaceans, which true crabs are. A 2019 molecular
analysis places them as the sister group of Ricinulei within Arachnida.

- Horseshoe crabs live primarily in and around shallow coastal waters on soft sandy or muddy bottoms. They tend to spawn in the intertidal zone at spring high tides.
- In recent years, population declines have occurred as a consequence of coastal habitat destruction and overharvesting.
- Given their origin 450 million years ago, horseshoe crabs are considered living fossils. These animals have existed virtually unchanged since the time of the dinosaurs and are important ecosystem engineers and predators of small organisms in modern intertidal environments.
- There are four types of horseshoe crab species:
  a) Mangrove Horseshoe Crab found in South and Southeast Asia
  b) Atlantic or American Horseshoe Crab found along the American Atlantic coast and in the Gulf of Mexico
  c) Indo-Pacific, Indonesian, Indian or southern horseshoe crab found in South and Southeast Asia
  d) Chinese, Japanese or Tri-spine Horseshoe Crab found in Southeast and East Asia
- In India, Odisha is their largest habitat.

Protection Status:
- IUCN List
  o American horseshoe crab: Vulnerable
  o Tri-spine horseshoe crab: Endangered
  o The two other species are not listed yet
- Wildlife Protection Act, 1972: Schedule IV: Catching and killing of a horseshoe crab is an offence

Fishing Cats
- The Odisha forest department has started a two-year conservation project for fishing cats in Bhitarkanika National Park.
- The fishing cat (Prionailurus viverrinus) is a medium-sized wild cat of South and Southeast Asia.
- It lives foremost in the vicinity of wetlands, along rivers, streams, oxbow lakes, in swamps, and mangroves.
- It is nocturnal and twice the size of a house cat and apart from fish also preys on frogs, crustaceans, snakes, birds, and scavenges on carcasses of larger animals.
- Protection Status:
  o IUCN Red List: Vulnerable
  o CITES: Appendix II
  o Indian Wildlife Protection Act, 1972: Schedule I
- West Bengal launched the Fishing Cat Project in 2010 and declared the Fishing Cat as the State Animal in 2012.
Gee’s Golden Langur

- Gee’s golden langur, also known as simply the golden langur, is an Old-World monkey found in a small region of western Assam, India and in the neighboring foothills of the Black Mountains of Bhutan.

- The coat of the adult golden langur ranges from cream to golden; on its flanks and chest the hairs are darker and often rust coloured; the coats of the juveniles and females are lighter, silvery white to light buff.

- Protection Status:
  - IUCN List: Endangered
  - CITES: Appendix I
  - Wildlife Protection Act, 1972: Schedule I

Hyacinth Macaw

- The hyacinth macaw is a parrot native to central and eastern South America.

- With a length (from the top of its head to the tip of its long-pointed tail) of about one meter it is longer than any other species of parrot. It is the largest macaw and the largest flying parrot species.

- Protection Status:
  - IUCN List: Vulnerable
  - CITES: Appendix I

Marmots

- The Marmots have come into focus ever since the incidents of plague in Mongolia, China and the Russian Far East have been caused largely after locals consumed the Tarbagan Marmot.

- Marmots are relatively large ground squirrels in the genus Marmota, with 15 species living in Asia, Europe and North America.

- These herbivores are active during the summer when often found in groups but are not seen during the winter when they hibernate underground. They are the heaviest members of the squirrel family.

- South Asia or the Indian Subcontinent is home to the Himalayan Marmot as well as the Long-tailed Marmot. Both are Least Concerned in the IUCN Red List.

- Tarbagan marmot or Mongolian marmot found in Mongolia, China, and parts of Russia (Siberia). IUCN Status: Endangered

- Marmots are eaten in China and Mongolia for proteins and hunted for their fur.

Assam keelback

- The Assam keelback snake, non-venomous snake, has been sighted by a team from the Wildlife Institute of India, Dehradun, for the first time since 1869.
● This snake was spotted in 2018 by zoologist Abhijit Das when he, along with a team, was re tracing the Abor expedition – an iconic expedition that took place from 1911-1912.
● First known as Hebius pealii this snake was named Amphiesma Pealii, after Samuel Edward Peal, a British tea planter who first collected two specimens of this snake from upper Assam, 129 years ago.
● The Assam keelback is so far known only to inhabit Sivasagar in Upper Assam and Poba in Assam-Arunachal border.

Golden Birdwing
● A Himalayan butterfly named Golden Birdwing is now India’s largest butterfly.
● Before it, Southern Birdwing held this record since 1932. Southern Birdwing is the state butterfly of Karnataka.
● While the female Golden Birdwing was recorded from Didihat in Uttarakhand, the largest male was from the Wankhar Butterfly Museum in Meghalaya capital Shillong.

Ophiocordyceps Nutans
● Ophiocordyceps nutans is an entomopathogenic fungus (a fungus that can act as a parasite of insects and kills or seriously disables them) and researchers for the first time found these fungi in central India in Kanger Valley National Park in Chhattisgarh.
● Earlier, these have been reported in India only from the Western Ghats.
● The fungus was found on its specific host insect Halyomorpha halys. Also called the stink bug, this insect is a pest to forest trees and agricultural crops.
● Several species of the Ophiocordyceps fungi have medicinal properties. Reports have shown that China has been traditionally using it. Also, in the Western Ghats, the local people use these fungi as an immune stimulator.

Rare Orchid Species
● A rare orchid species, ground orchid, has been rediscovered in India in Dudhwa Tiger Reserve (protected area in Uttar Pradesh) chanced upon upon the white flower with bright pink hues.
  o In India, the species was last recorded in Pilibhit (Uttar Pradesh) in 1902.
  o IUCN Red List: Critically Endangered
  o In 2008, the plant species was sighted in Bangladesh for the first time.
● Tiger orchids (Grammatophyllum speciosum) are in full bloom at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Kerala.
  o It is called Tiger for their large and resplendent flowers which resemble the tiger skin, flowers in alternate years.
  o These epiphytic plants are not native to India. They, in fact, are endemic to southeast Asia.
It flowers in alternate years and remains in bloom for about a month.

Ground orchid  Tiger orchids

South Asian River Dolphin
The South Asian river dolphin (*Platanista gangetica*) is an endangered freshwater or river dolphin found in the region of Indian subcontinent, which is split into two subspecies,

1. Ganges River Dolphin
   - Primarily found in the Ganges and Brahmaputra Rivers and their tributaries in India, Bangladesh, and Nepal.
   - **National Aquatic Animal** of India and **official animal** of the Indian city of Guwahati.
   - Vikramshila Gangetic Dolphin Sanctuary (VGDS) in Bihar’s Bhagalpur district is India’s only sanctuary for dolphins.
   - Synonyms: Ganges susu, shushuk

2. Indus River Dolphin
   - Found only in the main channel of the Indus River in Pakistan and active channels connected to it between the Jinnah and Kotri barrages, and in the River Beas (a tributary of the Indus) in Punjab in India.
   - National Mammal of Pakistan.
   - **Synonyms**: bhulan, Indus dolphin, Indus blind dolphin
   - Protection Status:
     - IUCN List: Endangered
     - CITES: Appendix I
     - Wildlife Protection Act, 1972: Schedule I
Two New Butterfly

- Lepidopterists (a person who studies or collects butterflies and moths) have discovered the Striped Hairstreak and Elusive Prince in Arunachal Pradesh.

- The Striped Hairstreak was first recorded by Japanese entomologists in Hainan province of China.

- Elusive Prince has a Vietnamese connection and was thought to be the more familiar Black Prince found in the Eastern Himalayas.

Globba Andersonii

- A rare and critically endangered plant species called Globba andersonii from the Sikkim Himalayas near the Teesta river have been rediscovered in the valley region after a gap of nearly 136 years.

- The plant, known commonly as ‘dancing ladies’ or ‘swan flowers’ was thought to have been extinct until its “re-collection”, for the first time since 1875.

- The earliest records of the collection of this plant were dated between the period 1862-70 when it was collected by Scottish botanist Thomas Anderson from Sikkim and Darjeeling. Then, in 1875, the British botanist Sir George King, had collected this taxon from the Sikkim Himalayas.

- Globba andersonii are characterised by white flowers, non-appendaged anthers (the part of a stamen that contains the pollen) and a “yellowish lip”.

- Classified as “critically endangered” and “narrowly endemic”, the species is restricted mainly to the Teesta River Valley region which includes the Sikkim Himalayas and Darjeeling hill ranges.

Central Zoo Authority

- The Environment Ministry has reconstituted the Central Zoo Authority (CZA) to include an expert from the School of Planning and Architecture, Delhi, and a molecular biologist.

- Apart from the chairman, it consists of 10 members and a member-secretary. Almost all of them are officials in the Environment Ministry and non-government experts are those who are wildlife conservationists or retired forest officers.

- The CZA is a statutory body constituted under Wild Life (Protection) Act 1972, in 1992 and is chaired by the Environment Minister and tasked with regulating zoos across the country.

- The authority lays down guidelines and prescribes rules under which animals may be transferred among zoos nationally and internationally. It also regulates the exchange of animals of endangered category Listed under Schedule-I and II of the Wildlife Protection Act between Indian and foreign zoos.
**Coccolithophores**

- A study of a microscopic ancient marine algae (Coccolithophores) led by the National Centre for Polar and Ocean Research (NCPOR) has found that there is a decrease in the concentration of oceanic calcium carbonate (CaCO3) in the southern Indian Ocean.
- This decrease in CaCO3 is attributed to the increase in the concentration of another single-celled algae known as diatoms. This, in turn, will affect the growth and skeleton structure of coccolithophores, with potential significance for the world ocean ecosystem.
- Coccolithophores are single-celled algae living in the upper layers of the world's oceans. They have been playing a key role in marine ecosystems and the global carbon cycle for millions of years. Coccolithophores calcify marine phytoplankton that produce up to 40 per cent of open ocean calcium carbonate and are responsible for 20 per cent of the global net marine primary productivity.
- Coccolithophores build exoskeletons from individual CaCO3 plates consisting of chalk and seashells building the tiny plates on their exterior.
- Though carbon dioxide is produced during the formation of these plates, coccolithophores help in removing it from the atmosphere and ocean by consuming it during photosynthesis. At equilibrium, coccolithophores absorb more carbon dioxide than they produce, which is beneficial for the ocean ecosystem.

**Advisory To Import Live Exotic Animals**

- The Union Ministry of Environment, Forest and Climate Change (MoEF&CC) issued an advisory to streamline and formalise the process of importing live exotic animals.
- The advisory has defined them as those that are mentioned under the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), but not under the schedules of the Wild Life (Protection) Act, 1972.
- Many exotic species of birds, reptiles and amphibians are imported into India for commercial purposes.
- These imports were happening though the Director General of Foreign Trade (DGFT), but they were beyond the purview of the forest departments and the chief wildlife wardens weren’t aware about them. Now, with this advisory, they’ll be kept in the loop.
- The advisory has provisions for import and disclosure of exotic animals and their progeny already in India.
- A person trying to import a live exotic animal will have to submit an application for grant of a licence to the DGFT under the Ministry of Commerce and Industry.
- The importer will also have to attach a No Objection Certificate (NOC) of the chief wildlife warden of the state concerned along with the application.
- For those people who have already imported exotic animals, a declaration will have to be made within six months, which wouldn't require submissions on the provenance of the animal. However, if the declaration is made after six months, documents will have to be submitted.
- The major reason to do this is to regulate the trade because the issue of zoonotic diseases is also linked to wildlife. With this advisory, it will be known how many such exotic animals there in the country are.
- However, the advisory did not provide answers to all problems as it does not have the force of law.
CITES

- CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as the Washington Convention) is a multilateral treaty to protect endangered plants and animals.

- It was drafted because of a resolution adopted in 1963 at a meeting of members of the International Union for Conservation of Nature (IUCN).

- The convention was opened for signature in 1973 and CITES entered into force on 1 July 1975.

- The CITES Secretariat is administered by UNEP (The United Nations Environment Programme) and is located at Geneva, Switzerland.

- The Conference of the Parties (CoP) to CITES is the supreme decision-making body of the Convention and comprises all its Parties.

- The last CoP (18th) was held at Geneva (Switzerland), in August 2019. The next one (CoP 19) will be in San Jose, Costa Rica in 2022.

- Although CITES is legally binding on the Parties, it does not take the place of national laws. It provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

- India ratified CITES in 1976 and hosted 3RD CoP in 1981.

Poaching During Lockdown

According to the report ‘Indian wildlife amidst Covid-19 crisis: An analysis of poaching and illegal wildlife trade trends’ released by the TRAFFIC, there has been a significant increase in reported poaching of wild animals during the lockdown.

TRAFFIC

- TRAFFIC, the wildlife trade monitoring network, is a joint program of WWF and IUCN (the International Union for Conservation of Nature).

- TRAFFIC works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

- It is an International non-governmental organization founded in 1976 with headquarters at Cambridge, United Kingdom.

66-million-year-old egg found in Antarctica “The Thing”

- Scientists have finally resolved the mystery behind the 66-million-year-old fossil egg found in Antarctica’s Seymour Island which was found in 2011.

- The fossil, since then was kept at a museum in Chile and was named ‘The Thing’ for over the next 7 years scientists kept on trying to resolve the football-sized mysterious fossil.

- After much research and analysis, scientists have said that the egg belongs to an extinct giant sea lizard or snake (the marine lizards also known as mosasaurs) that lived alongside the dinosaurs.

- The millions year old fossil egg, measuring 29 cm by 20 cm (8 inches by 11 inches), is the second-largest egg in the world. The first position remains with the eggs of Madagascar’s extinct giant flightless elephant birds.

- This new egg is the very first fossil egg from Antarctica, and the largest soft-shelled egg ever discovered.
Preventing the Next Pandemic: Zoonotic diseases and How to Break the Chain of Transmission Report

- This report is a joint effort by the United Nations Environment Programme (UNEP) and the International Livestock Research Institute.
- The report identifies the One Health approach -- which unites public health, veterinary and environmental expertise -- as the optimal method for preventing as well as responding to zoonotic disease outbreaks and pandemics.
- It identifies seven trends driving the increasing emergence of zoonotic diseases, including increased demand for animal protein; a rise in intense and unsustainable farming; the increased use and exploitation of wildlife; and the climate crisis.
- The report finds that Africa in particular, which has experienced and responded to a number of zoonotic epidemics including most recently, to Ebola outbreaks, could be a source of important solutions to quell future outbreaks.
- A “zoonotic disease” or “zoonosis” is a disease that has passed into the human population from an animal source.

International Livestock Research Institute

- It is a non-profit institution helping people in low- and middle-income countries to improve their lives, livelihoods and lands through the animals that remain the backbone of small-scale agriculture and enterprise across the developing world.
- International Livestock Research Institute is a CGIAR research centre co-hosted by Kenya and Ethiopia and with 14 other offices across Africa and Asia.

Assam Gas Leak

- A gas leak happened at Baghjan well in Tinsukia district of Assam following a blowout.
- Since 2006, it has been drilled by Oil India Limited (OIL).
- The well is a purely gas-producing well and is at a distance of 900 metres from the Dibru-Saikhowa National Park. There are reports that the condensate is falling into Dibru-Saikhowa National Park and Maguri-Motapung wetland too.
- The authorities have built a temporary water reservoir through pipelines from the Dangori river nearby the well to control the blowout.

Dibru-Saikhowa National Park

- It is a National Park, a Biosphere Reserve and one of the 19 biodiversity hotspots in the world.
- It is an Important Bird Area (IBA) identified by the Bombay Natural History Society. It is most famous for the rare white-winged wood ducks as well as feral horses.
- It is situated in the south bank of the river Brahmaputra in Assam.
- The forest type comprises semi-evergreen forests, deciduous forests, littoral and swamp forests and patches of wet evergreen forests. It is the largest swamp forest in north-eastern India.
- Maguri Motapung Beel, an Important Bird Area, is less than 10 km from Dibru-Saikhowa National Park and part of the Dibru-Saikhowa Biosphere Reserve. The wetland derives its name from “Magur”, the local word for the catfish ‘Clarias batrachus (walking catfish)’.
**Oil Spill in Russia’s Arctic region**
- Russia declared a state of emergency in its Krasnoyarsk Region after a power plant fuel leak in its Arctic region caused 20,000 tonnes of diesel oil spilled into the Ambarnaya river, turning its surface crimson red.
- Krasnoyarsk Region is located in the vast and sparsely populated Siberian peninsula and the Ambarnaya river is part of a network that flows into the environmentally sensitive Arctic Ocean.
- The Ambarnaya river flows to the Pyasino lake and river Pyasina, which connects it to the Kara Sea, a part of the Arctic Ocean.

**Seabed 2030 Project**
- The Nippon Foundation-GEBCO Seabed 2030 Project, which is coordinating efforts to complete the mapping of the entire ocean floor by 2030.
- It was launched in 2017 and it had finished mapping nearly one-fifth of the world’s ocean floor.
- The knowledge of bathymetry (the measurement of the shape and depth of the ocean floor) is instrumental in understanding several natural phenomena, including ocean circulation, tides, and biological hotspots.
- It also provides key inputs for navigation, forecasting tsunamis, exploration for oil and gas projects, building offshore wind turbines, fishing resources, and for laying cables and pipelines.
- This data becomes highly valuable during disaster situations. Due to the previously mapped seafloor, scientists in Japan were able to reconstruct the forces behind the destructive 2011 Tohoku earthquake.

**Forest Fire Prevention and Management Scheme**
- It is the only centrally funded program specifically dedicated to assist the states in dealing with forest fires.
- In 2017, it replaced the Intensification of Forest Management Scheme (IFMS).
- Funds allocated under the Scheme are according to a center-state cost-sharing formula, with a 90:10 ratio of central to state funding in the Northeast and Western Himalayan regions and a 60:40 ratio for all other states.
- It also provides the states the flexibility to direct a portion of the National Afforestation Programme (NAP) and Mission for Green India (GIM) funding toward forest fire work.

**Global Warming and Arctic Sea**
- The National Centre of Polar and Ocean Research (NCPOR) found the largest decline in the Arctic Sea ice in the last 41 years due to global warming — leading to localised increase in evaporation, air humidity, cloud cover and rainfall.
- The NCPOR noted that this decline in Arctic Sea ice happened in July 2019. In the last 40 years (1979-2018), the sea ice has been declining at -4.7 percent per decade, while its rate was found to be -13 per cent in July 2019.
- NCPOR noted that if this trend continues, there would be no ice left in the Arctic Sea by 2050.
National Centre for Polar and Ocean Research (NCPOR)

- Formerly known as the National Centre for Antarctic and Ocean Research (NCAOR), it is an Indian research and development institution, situated in Vasco da Gama, Goa.
- It is an autonomous Institution of the Department of Ocean Development (DOD), Ministry of Earth Sciences
- It is the nodal agency for planning, promotion, coordination and execution of the entire gamut of polar and Southern Ocean scientific research in the country as well as for the associated logistics activities.

Land Use Change and Zoonoses

- As per United Nations Convention to Combat Desertification (UNCCD), land use degradation creates ground for zoonotic disease like COVID-19 as the interaction and physical distance between animals and humans gets closer
- June 17 is observed worldwide as the World Day to Combat Desertification and Drought and this year it was hosted virtually by the Korea Forest Service.
- 2020 Theme: Food, Feed, Fibre: Sustainable production and consumption

Reducing Emissions from Deforestation and forest Degradation (REDD+)

- Uganda has become the first African country to submit results for Reducing emissions from deforestation and forest degradation (REDD+) to the United Nations Framework Convention on Climate Change (UNFCCC).
- It paved the way for potential results-based payments to the country.
- The submission of the results is a significant development on REDD+ for Africa. This will encourage other African countries to reduce carbon emissions by decreasing deforestation and forest degradation.
- Africa had the greatest annual rate of net forest loss, at 3.9 million ha, across the world in this decade, according to the FAO’s Global Forest Resources Assessment 2020.

REDD+

- It is a mechanism developed by the parties to the UNFCCC to reduce emissions from deforestation and forest degradation.
- REDD was first discussed in 2005 by the UNFCCC at its 11th session of the Conference of the Parties to the Convention (COP) at the request of Costa Rica and Papua New Guinea, on behalf of the Coalition for Rainforest Nations.
- REDD received substantial attention from the UNFCCC (COP 13, 2007), where the first substantial decision on REDD+ was adopted. It called for demonstration activities to be reported upon two years later and assessment of drivers of deforestation.
- REDD+ was also referenced in the decision of the "Bali Action Plan", with reference to all five eligible activities for REDD+ (with sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks constituting the "+" in REDD+)
- It has three phases — Readiness, Implementation and Result-based actions.
- Most of the key REDD+ decisions were completed by 2013, with the final pieces of the rulebook finished in 2015.
- **Results-based payments** comprise the final REDD+ phase.
  - Financial incentives to developing countries - done through rigorous UN-backed technical evaluations
  - The **Green Climate Fund (GCF)** established at Conference Of Parties (COP)-17 to function as the financial mechanism for the UNFCCC, is currently financing REDD+ programs.
  - Brazil was the first country to receive $96.5 million under the results-based payments.

**Jet Zero Plan**
- The **United Kingdom** announces, ‘Jet Zero’ Plan to drive down greenhouse gas emissions from aviation to make carbon-free transatlantic flights possible within a generation.
- Aviation emissions currently account for more than 2% of global greenhouse gases and have risen by 70% since 2005. The International Civil Aviation Organization forecasts that they will rise another 300% by 2050 in the absence of measures to bring them down.
- The U.K has formed a group bringing together leaders from aviation, environmental groups and government to form the “Jet Zero Council.”

**Assessment Of Climate Change Over The Indian Region**
- The **Union Ministry of Earth Sciences (MoES)** published the first ‘Assessment of Climate Change over the Indian Region.’
- The projections, based on a climate forecasting model developed at the **Indian Institute of Tropical Meteorology (IITM), Pune**, will be part of the next report of the **Intergovernmental Panel on Climate Change (IPCC)**, expected to be ready in 2022.
- The report said that in a worst-case scenario, average surface air temperatures over India could rise by up to 4.4 degrees Celsius by the end of the century as compared to the period between 1976 and 2005.
- The worst-case scenario is defined by the **Representative Concentration Pathway (RCP) 8.5** that calculates a radiative forcing of 8.5 watt per square metre due to the rising greenhouse gas (GHG) emissions in the atmosphere. **Radiative forcing** or **climate forcing** is the difference between sunlight energy absorbed by the Earth (including its atmosphere) and the energy that it radiates back into space.
- Under an *intermediate scenario* of RCP 4.5, the country’s average temperature could rise by up to 2.4°C.
- The rise in temperatures will be even more pronounced in the **Hindu Kush-Himalayan** region where the average could reach 5.2°C. The region is already highly vulnerable to climate-related variability in temperatures, rainfall, and snowfall.
- Between **1900 and 2018**, the average temperatures of India rose by 0.7°C.
- The report predicts that **monsoon** rainfall could change by an average of 14 per cent by 2100 that could go as high as 22.5 per cent.
- The report does not mention if this change will be an increase or a decrease but still represents variability. It further says that the overall rainfall during the monsoon season has decreased by six per cent between 1950 and 2015.
Aerosol Radiation Effects In Western-Trans Himalayas

- A study by the Aryabhatta Research Institute of Observational Sciences (ARIES) has found that radiative forcing of aerosols is much higher over the high altitudes of western trans-Himalayas.
- Monthly-mean atmospheric radiative forcing of aerosols leads to heating rates of 0.04 to 0.13 C per day. Further, the temperature over the Ladakh region is increasing 0.3 to 0.4 degrees Celsius per decade from the last 3 decades.
- The atmospheric aerosols play a key role in the regional/global climate system through scattering and absorption of incoming solar radiation and by modifying the cloud microphysics.
- Despite the large progress in quantifying the impact of different aerosols on radiative forcing, it remains one of the major uncertainties in the climate change assessment.
- Precise measurements of aerosol properties are required to reduce the uncertainties, especially over the oceans and high-altitude remote locations in the Himalayas where they are scarce.
- The scientists observed and analysed the aerosol radiative forcing (ARF) assessment and aerosol optical depth (AOD).
- ARF is the effect of anthropogenic aerosols on the radiative fluxes at the top of the atmosphere and at the surface and on the absorption of radiation within the atmosphere.
- AOD is a measure of how light is absorbed or reflected by airborne particles as it travels through the atmosphere.

Ozone Pollution

- While particulate matter and nitrous oxide levels fell during the lockdown, ozone (a harmful pollutant) increased in several cities, according to an analysis by the Centre for Science and Environment (CSE).
- Ozone is primarily a “sunny weather problem” in India, that otherwise remains highly variable during the year.
- It is a highly reactive gas; even short-term exposure of an hour is dangerous for those with respiratory conditions and asthma and that’s why an eight-hour average is considered for ozone instead of the 24-hour average for other pollutants.
- Ozone is not directly emitted by any source but is formed by photochemical reactions between oxides of nitrogen (NOx) and other volatile organic compounds (VOCs) and gases in the air under the influence of sunlight and heat. It can be curtailed only if gases from all sources are controlled.
- The ozone present in the stratosphere protects human beings from harmful Ultraviolet (UV) radiation whereas the ground level ozone (troposphere) is harmful.
- About 90% of total ozone in the atmosphere is in the stratosphere, and 10% is in the troposphere. Although tropospheric ozone is less concentrated than stratospheric ozone, it is of concern because of its health effects. Ozone in the troposphere is considered a greenhouse gas, and may contribute to global warming.

Anthropause or Great Pause

- Researchers have coined the term “Anthropause” also being referred to as the “Great Pause” to refer to the Covid-19 induced lockdown period and they will study its impact on other species.
● Reduction in human activity during the coronavirus lockdown on both land and sea has been “unparalleled” in recent history, and the effects have been “drastic, sudden and widespread”.

**Gynandromorphism**

● A rare biological phenomenon, Gynandromorphism, has been sighted in a dragonfly, the Scarlet Skimmer (*Crocothemis Servilia*), which is found in the Kole wetlands (Kerala).

● A gynandromorph is an organism that contains both male and female characteristics. The term comes from the Greek (gynē = female, anēr= male, and morphē = form).

● Notable gynandromorphic organisms are butterflies, moths, and other insects, wherein both types of body part can be distinguished physically due to sexual dimorphism. It has been documented in birds too.

● They are viewed by the scientific community as a genetic aberration (chromosomal disorder or mutation which is due to a missing, extra, or irregular portion of chromosomal DNA).

**Kole Wetlands**

● It is a part of Vembanad-Kole wetlands (a Ramsar site) and situated in Thrissur District in Kerala.

● It gives 40% of Kerala's rice requirement and acts as a natural drainage system.

**Namami Gange**

● The World Bank has approved a five-year loan (for 2nd Phase) to the Namami Gange project worth ₹3,000 crore ($400 million) to develop and improve infrastructure projects to abate pollution in the river basin.

  ○ The Namami Ganga or the National Mission for Clean Ganga (NMCG) has already received ₹4,535 crore ($600 million) from the World Bank until December 2021 as part of the first phase of the National Ganga River Basin project.

● Namami Gange Programme is an Integrated Conservation Mission, approved as a ‘Flagship Programme’ by the Union Government in June 2014 with a budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.

● It is implemented by the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti with the help of the State Government (5 States - Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal).

● National River Ganga Basin Authority (NRGBA) was formed by the Government of India in the year 2009 under Section-3 of the Environment Protection Act, 1986. It declared the Ganga as the ‘National River’ of India.

● In 2014, Clean Ganga Fund was formed for cleaning up of the Ganga, setting up of waste treatment plants, and conservation of biotic diversity of the river.

● Bhuvan-Ganga Web App ensures involvement of the public in monitoring of pollution entering the river Ganga.

**Global E-waste Monitor 2020**

● The Global E-waste Monitor 2020 is a collaborative product of the Global E-waste Statistics Partnership (GESP), formed by UN University (UNU), the International Telecommunication
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Union (ITU), and the International Solid Waste Association (ISWA), in close collaboration with the UN Environment Programme (UNEP).

- According to it, there was 53.6 million tonnes (MT) e-waste in 2019 that is a nearly 21 per cent increase in just five years. It will increase by 38 per cent in the decade between 2020 and 2030.
- Asia generated the greatest volume of e-waste in 2019 — some 24.9 MT, followed by the Americas (13.1 MT) and Europe (12 MT). Africa and Oceania generated 2.9 MT and 0.7 MT respectively.
- Most E-waste in 2019 consisted of small equipment (17.4 MT), large equipment (13.1 MT) and temperature exchange equipment (10.8 MT).
- Less than 18 percent of the e-waste generated in 2019 was collected and recycled.
- The number of countries that have adopted a national e-waste policy, legislation or regulation has increased from 61 to 78 and includes India.
- Formal recycling capacity remains underutilised, as the large majority of the waste is still handled by the informal sector. About 90 per cent of the country’s e-waste is recycled in the informal sector.
- E-waste (discarded electrical and electronic equipment) is a health and environmental hazard, containing toxic additives or hazardous substances such as mercury, which damages the human brain and / or coordination system.

Decarbonising Transport in India

- NITI Aayog in collaboration with International Transport Forum (ITF) launched the “Decarbonising Transport in India” project on 24 June, with the intention to develop a pathway towards a low-carbon transport system for India.
- India has been a member of ITF, an intergovernmental organisation for transport policy, since 2008.
- The India project is carried out in the wider context of the ITF’s Decarbonising Transport initiative. It is part of the Decarbonising Transport in Emerging Economies (DTEE) family of projects, which supports transport decarbonisation across different world regions.
- The DTEE is a collaboration between the ITF and the Wuppertal Institute, supported by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.
- India, Argentina, Azerbaijan, and Morocco are current participants.

International Transport Forum

The International Transport Forum, headquartered in Paris, France, is an inter-governmental organisation within the OECD system. It is the only global body with a mandate for all modes of transport. It acts as a think tank for transport policy issues and organises the annual global summit of transport ministers.

Renewable Energy and Indian Railways

- The Indian Railways decided to be self-reliant for its energy needs by utilizing its vacant lands for Renewable Energy (RE) projects.
- It will utilize solar energy for meeting its traction (the action of drawing or pulling something over a surface, especially a road or track) power requirement.
- In January 2020, it was announced that the entire network of the Indian Railways will run on electricity by 2024 and become a net-zero emission network by 2030.
Virtual Climate Action Ministerial

- The fourth edition of the virtual Ministerial on Climate Action witnessed countries exchanging views on how countries are aligning economic recovery plans with the Paris Agreement and the critical enabling conditions to ensure continued climate action.
- It was co-chaired by European Union, China and Canada to advance discussions on the full implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) and to demonstrate continued political commitment to global climate action.
- The Union Environment Minister represented India and called upon developed country parties to do their part as envisaged under UNFCCC and its Paris Agreement, for extending financial and technological support to developing countries.
  - USD 1 trillion was promised by 2020 but has not been fulfilled so far, and it is expected that the promised amount is mobilized and delivered, for further strengthening climate actions in developing countries.

Paris Agreement (COP 21)

- The Paris Agreement is a historic international accord signed at the UNFCCC Conference of Parties (COP) in 2015, that brings almost 200 countries together to address climate change and its negative impacts.
- Targets:
  - Temperature: hold warming below 2°C above pre-industrial levels with effective efforts to limit warming to 1.5°C
  - Adaptation: Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development
  - Low Emission Finance flows: Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.
- Intended Nationally Determined Targets (INDC): The Paris Agreement requires all Parties to put forward their best efforts through INDC’s and to strengthen these efforts in the years ahead.
- It called for raising money to help developing countries adapt to climate change and transition to clean energy was an important point in the agreement. However, it is non-legally binding to developed countries.
- The USA has withdrawn from the agreement.
- India’s target
  - Reduce the emissions intensity of its GDP by 33% to 35% by 2030 from 2005 level,
  - Increase total cumulative electricity generation from fossil free energy sources to 40% by 2030,
  - Create an additional carbon sink of 2.5 to 3 billion tons through additional forest and tree cover.
  - India has a target of installing 175 GW of renewable power capacity by 2022.

Rewa Solar Project

- The Prime Minister has inaugurated the 750 MW solar project set up in Rewa, Madhya Pradesh.
- It comprises three solar generating units of 250 MW each located on a 500-hectare plot of land situated inside a Solar Park (total area 1500 hectare).
● It is the first solar project in the country to break the **grid parity barrier**. Grid parity occurs when an alternative energy source can generate power at a cost of electricity that is less than or equal to the price of power from the electricity grid.

● It is the **first renewable energy project to supply an institutional customer outside the state**, i.e. Delhi Metro, which will get 24% of energy from the project with the remaining 76% being supplied to the state DISCOMs of Madhya Pradesh.

● It is also **India’s first solar project to get funding from Clean Technology Fund (CTF)**, which is available at a rate of 0.25% for a 40-year period from the **World Bank**.

● It has also received the **World Bank Group President’s Award for innovation and excellence**.

**Medicinal and Aromatic Plants Genetic Resources (MAPGRs)**

● **National Medicinal Plants Board (NMPB)** under **Ministry of AYUSH** and **ICAR-National Bureau of Plant Genetic Resources (NBPR)** under **Department of Agricultural Research and Education** have entered into a Memorandum of Understanding (MoU) to conserve the Medicinal and Aromatic Plants Genetic Resources (MAPGRs) at designated space of ICAR-NBPR in **long-term** storage module in the **National Gene bank** and or at **Regional Station** for **medium term** storage module.

● **National Gene Bank** was notified in 1996-97 and hosted by the National Bureau of Plant Genetic Resources (NBPR), New Delhi.

**India’s Seed Bank**

● India has also established its own seed storage facility at Chang La in **Ladakh**. It was built jointly by the Defence Institute of High-Altitude Research (DIHAR) and the National Bureau of Plant Genetic Resources (NBPR) in 2010 under the aegis of Defence Research and Development Organisation (DRDO).

● The **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)** in Hyderabad had set up the **world’s first gene bank** that is powered entirely by **solar energy** in Hyderabad in 2019. There is a total of 16 gene banks, including one at the ICRISAT, located in different cities across India.

**Other Seed Bank:**

● The **Millennium Seed Bank Project (MSBP)** is located at the Royal Botanical Gardens, Kew, **United Kingdom**.

● The **Vavilov Institute of Plant Industry** was established in 1894 in St. Petersburg, **Russia**, and is the oldest seed bank in the world.

● **Berry Botanic Garden** (Portland, **United States**): Seeds from endangered plants of the Pacific Northwest.

● **International Center for Tropical Agriculture** (Coli, **Colombia**): Cassava, forages, beans.

● **International Potato Center** (Lima, **Peru**): Potatoes

● **International Institute for Tropical Agriculture** (Ibadan, **Nigeria**): Groundnut, cowpea, soybean, yam

● **International Rice Research Institute** (Los Banos, **Philippines**): Rice
Saharan Cheetah

- Critically Endangered Saharan Cheetah was seen in Hoggar Mountains national park Algeria for the first time in a decade
- The Saharan cheetah is quite different in appearance from the other African cheetahs. Its coat is shorter and paler in colour. Its face has few or no spots and tear stripes are almost absent.
- Its range is now limited to isolated pockets across the Sahara and Sahel from Mali in the west to the Central African Republic in the east. The main countries where it is found include Algeria, Chad, Mali, Benin, Burkina Faso and Niger.
- In 2012, the International Union for Conservation of Nature estimated the remaining population in Algeria at just 37 individuals.

Pench National Park

- The recent death of a 10-year-old ailing male tiger due to respiratory Illness, in the Pench Tiger Reserve (PTR) raises COVID-19 Fears.
- It is located in the Madhya Pradesh and also shares a boundary with Maharashtra.
- It was established as a tiger reserve in 1992.
- The national park is named after the river- Pench and comprises the Priyadarshini Pench National Park, the Pench Mowgli Sanctuary.

National Board for Wildlife (NBWL)

- NBWL issued the final clearance for the ₹55,335-crore Mumbai-Nagpur Super Communication Highway.
- The project will require felling of over one lakh trees and passes through the 10-km eco-sensitive zone (ESZ) of Katepurna and Karanja Sohal Blackbuck wildlife sanctuaries (Protected area in Washim district in Maharashtra) towards one end of the state while cutting through the ESZ of Tansa lake sanctuary (located in Thane district of Maharashtra).
- NBWL is a statutory body, under the Union Environment Ministry, constituted under Section 5 A the Wildlife Protection Act (WPA), 1972.
- The WPA mandates that without the approval/recommendation of the NBWL, construction of tourist lodges, alteration of the boundaries of PAs, destruction or diversion of wildlife habitat and de-notification of Tiger Reserves, cannot be done.
- Composition: It is a 47-member board (including the chairman) which usually meets once a year. It is chaired by the Prime minister.

National Green Tribunal (NGT)

NGT has urged the State Pollution Control Board (SPCB) and Pollution Control Committee (PCC) to put in serious efforts to mitigate possible risk of unscientific disposal of the bio-medical waste arising out of the handling of the COVID-19 disease.

- The NGT was established on October 18, 2010 under the National Green Tribunal Act 2010 to handle the expeditious disposal of the cases pertaining to environmental issues.
- The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908 and Indian Evidence Act, 1872, but shall be guided by principles of natural justice.
It draws inspiration from India’s constitutional provision of Article 21 Protection of life and personal liberty, which assures the citizens of India the right to a healthy environment.

India is the third country following Australia and New Zealand to have such a system. Delhi Pollution Control Committee (DPCC) works under the act of (NGT).

New Delhi is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai are the other places of sitting of the Tribunal.

**Structure**

- The Tribunal is headed by a sitting or retired Supreme Court judge or the Chief Justice of a High Court.
- The chairperson is appointed by the Government with the consultation of CJI. The maximum age of chairperson will be 70 years if he is from SC and 67 years if he is from HC.
- Apart from Chairperson, it has at least 10 and maximum 20 Full time judicial members and at least 10 and maximum 20 Full time Expert Members.
- Each bench of the NGT will comprise at least one Judicial Member and one Expert Member.

**Powers:** The NGT has the power to hear all civil cases relating to environmental issues and questions that are linked to the implementation of laws listed in Schedule I of the NGT Act. These include the following:

- The Water (Prevention and Control of Pollution) Act, 1974;
- The Water (Prevention and Control of Pollution) Cess Act, 1977;
- The Forest (Conservation) Act, 1980;
- The Air (Prevention and Control of Pollution) Act, 1981;
- The Environment (Protection) Act, 1986;
- The Public Liability Insurance Act, 1991;
- The Biological Diversity Act, 2002

However, NGT is not empowered to hear matters pertaining to issues coming under the ambit of the Wildlife (Protection) Act, 1972 and the Indian Forest Act, 1927.

- Its decisions are subjected to judicial review. The decision of the NGT is binding on the parties, unless they approach the Supreme Court in appeal and the NGT’s order is either stayed or reversed.

**Central Pollution Control Board (CPCB)**

- It is a statutory organization under the Ministry of Environment, Forests and Climate Change.
- It was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.

**Leatherback Sea Turtles**

- Thailand has found the largest number of nests of rare leatherback sea turtles in two decades on beaches bereft of tourists because of the coronavirus pandemic.
Leatherback turtles are named so for their **shell**, which is **leather-like rather** than being **hard like** other turtles.

Leatherbacks are the **largest turtles on Earth**, growing up to **seven feet long and exceeding 2,000 pounds**.

They are one of the most **migratory**, crossing both the Atlantic and Pacific Oceans. Pacific leatherbacks migrate from nesting beaches in the Coral Triangle all the way to the California coast to **feed on the abundant jellyfish every summer and fall**.

**Population Range**: They can be found in the **tropic and temperate** waters of the Atlantic, Pacific, and Indian Oceans, as well as the Mediterranean Sea.

**Conservation status**: They are considered **endangered** in **Thailand**, and listed as a **vulnerable species** globally by the **International Union for Conservation of Nature**

**Dehing Patkai Wildlife Sanctuary**

The **National Board for Wild Life (NBWL)** has recommended coal mining in a part of an elephant reserve, **Saleki reserve forest**, in Assam.

**Saleki** is a **part of the Dehing Patkai Elephant Reserve** that includes the **Dehing Patkai Wildlife Sanctuary** located in the Dibrugarh and Tinsukia Districts of **Assam**.

Dehing Patkai Wildlife Sanctuary is also known as the **Jeypore Rainforest. Dehing** is the name of the **river** that flows through this forest and **Patkai** is the **hill** at the foot of which the sanctuary lies.

The most common mammal species of this sanctuary are hoolock gibbon, pig-tailed macaque, stump-tailed macaque, capped langur, Asian elephant, Bengal tiger, Indian leopard etc.

**World Wide Fund (WWF)**

Chess legend **Viswanathan Anand** has been named as the new **ambassador** for World Wide Fund (WWF) **India’s Environment Education program**.

As an ambassador, he will support **wildlife conservation and work to educate children** across India on issues related to the environment.

The announcement comes at a time when **WWF India is celebrating its 50 years of conservation in India**.

**About World Wide Fund for Nature (WWF)**

- Constituted in 1961 as an **NGO**
- Headquarters: **Vaud, Switzerland**
- **Symbol - The giant panda**
- **WWF India** was established as a Charitable Trust in November 1969.

**WWF’s Environment Education Programme**:

- Environment Education is the oldest programme of WWF-India.
- It was established in 1976.

**Sujalam Sufalam Jal Sanchay Abhiyan**

The **Gujarat state government** has launched the **3rd edition** of the Sujalam Sufalam Jal Sanchay Abhiyan to **prepare the water bodies** before the monsoon.
- **It is a water conservation scheme** and the first edition was launched in 2018 after experiencing a weak monsoon. The second edition was launched in 2019.
- **It aims to increase the water storage capacity** by deepening of lakes, check dams and rivers by removing silt, and it will be done with people’s participation as well as under MNREGA.
- **It works on a PPP model** with the government contributing 60% of the expenditure while the remaining 40% is provided by the people.

**Animal Adoption Programme**
- **Bannerghatta Biological Park (BBP), Bengaluru(Karnataka)** has come out with an animal adoption programme during the lockdown period for those looking for an opportunity to conserve wildlife and adopt animals at the zoo.
- **Animals that can be adopted**: King cobra, Indian rock python, Black buck, Sambar, Emu, Golden jackal, Indian leopard, Sloth bear, Hippopotamus, Bengal tiger, Giraffe, etc. It has provision for **Income Tax rebate** under 80G.
- In 2004, BBP was carved out of the **Bannerghatta National Park (BNP)** and brought under the Zoo Authority of Karnataka (ZAK).
- The valley of **Champakadhama hills** is inside the park.

**Dekho Apna Desh**
- The 13th session of the **Ministry of Tourism’s Dekho Apna Desh webinar** titled, ‘Destination-Sariska Tiger reserve’ was held in May 2020.
- Dekho Apna Desh is one of the three components of the Paryatan Parv. The other two are Tourism for All and Tourism & Governance. It intends to encourage Indians to travel their own country.

**Sariska Tiger Reserve**
- It is located in **Aravali hills** and forms a part of the Alwar District of Rajasthan.
- The Reserve is immensely rich in flora and fauna, and is famous for Royal Bengal Tiger.
- **Kankarwadi fort** is located in the center of the Reserve and it is said that Mughal emperor Aurangzeb had imprisoned his brother Dara Shikoh at this fort in struggle for succession to the throne.

**Black Panther in Netravali Sanctuary**
- A **black panther** was spotted for the first time in Goa’s Netravali Sanctuary.
- A black panther is the **melanistic colour variant** of any Panthera, particularly of the leopard in Asia and Africa, and the jaguar in the Americas. Melanism is the increased development of the dark-colored pigment melanin in the skin or hair.

**Netravali Wildlife Sanctuary**
- It is located in Goa and is part of the Western Ghats.
- It is bounded by Cotigao wildlife sanctuary on the eastern side and Bhagwan Mahaveer Sanctuary and Mollem National Park on the northern side.
- **Netravali or Neturli** is an important tributary of River Zuari, which originates in the sanctuary.
- It has two important waterfalls namely, Savari and Mainapi.
Tiger Population in Sunderbans Rises

- According to the West Bengal Forest Department, the tiger count for the year 2019-20 rose to 96, from 88 in 2018-19.
- Sundarbans is a vast contiguous mangrove forest ecosystem in the coastal region of Bay of Bengal spread over India and Bangladesh on the delta of the Ganges, Brahmaputra and Meghna rivers.
- It is the only mangrove forest in the world inhabited by tigers.
- It was recognised as UNESCO World Heritage Site in 1987 and ‘Wetland of International Importance’ under the Ramsar Convention in January, 2019.

Sal Forest Tortoise

- A recent study by Wildlife Institute of India (Dehradun), finds that over 90% of the potential distribution of the Sal forest tortoise falls outside the current protected area’s network. The study covers parts of India with Bangladesh and Bhutan.
- It is found that the representation of the species in protected areas is least, and there is little to no connectivity among most of the protected areas where the species is present.
- Sal Forest Tortoise is also known as the elongated tortoise and widely distributed over eastern as well as northern India and Southeast Asia.
- Protection Status:
  - IUCN Red List: Critically Endangered.
  - CITES: Appendix II
  - Wildlife (Protection) Act of 1972: Schedule IV

World Migratory Bird Day (WMBD)

- Every year it is observed on May 9. The theme of 2020 is “Birds Connect Our World”.
- The day was first introduced in 2006 after the Secretariat of Convention on the Conservation of Migratory Species of Wild Animals and the Secretariat of Agreement on the Conversation of African-Eurasian Migratory Waterbirds (AEWA) came up with a proposal.

For details on the CMS please refer Quick Revision Part 2

Locust Attacks

- Locusts have already been spotted in May in India that normally arrive during July-October. They have been sighted unusually even in urban areas.
- Locusts are a group of short-horned grasshoppers that have a high capacity to multiply, form groups, migrate over relatively large distances (they can fly up to 150 km per day) and, if good rains fall and ecological conditions become favourable, rapidly reproduce and increase some 20-fold in three months.
- Four species of locusts are found in India: Desert locust (Schistocerca gregaria), Migratory locust (Locusta migratoria), Bombay Locust (Nomadacris succincta) and Tree locust (Anacridium sp.).
Reason For Early Arrival

- This can be traced back to the **cyclonic storms Mekunu and Luban** that had struck **Oman and Yemen** respectively in 2018.
- These turned large **deserts tracts into lakes, facilitating locust breeding** that continued through 2019.
- Swarms attacking crops in **East Africa** reached peak populations from November, and built up in southern **Iran** and **Pakistan** since the beginning of 2020, with heavy rains in East Africa in **March-April enabling** further breeding.

Pinanga Andamanensis

- It is a **rare palm endemic to South Andaman Island**. Its entire population of some 600 specimens naturally occurs only in a tiny, evergreen forest pocket in South Andaman’s Mount Harriet National Park.
- Recently it has been successfully cultivated at Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Thiruvananthapuram (Kerala).
- It is a **critically endangered** species and has strong **resemblance** with the **areca palm tree**.
- The name is derived from ‘**Penang**’, the modern-day **Malaysian state**. “Penang itself has its origins in ‘**Pulau Pinang**’, which means ‘**Island of the Areca Nut Palm**’.
- **Mount Harriet** is the **third-highest peak in the Andaman** and Nicobar archipelago next to **Saddle**

International Day for Biological Diversity

- The **United Nations** has proclaimed **May 22** as the **International Day for Biological Diversity (IDB)** to increase understanding and awareness of biodiversity issues.
- **2020 Theme**: “**Our Solutions Are In Nature**”
- On this occasion, the Union Minister of Environment launched some **key initiatives** towards conservation of biodiversity.
  - ‘**Biodiversity Samrakshan Internship Programme**: It proposes to engage 20 students with postgraduate degrees for a period of one year through an open, online competitive process.
  - **Not all Animals Migrate by Choice Campaign**: The campaign, launched by the **Wildlife Crime Control Bureau**, with **UNEP**, seeks to address these environmental challenges, to raise awareness, and to advocate solutions.

World Turtle Day

- In an attempt to raise awareness on conservation of tortoise and turtles, and on illegal trafficking, every year **May 23** is celebrated as World Turtle Day.
- The day was founded by **American Tortoise Rescue (ATR)**, a non-profit animal rescue organization.
- **2020 Theme ‘**Adopt, Don’t Shop’**
Turtles in India
- There are five species in Indian waters i.e. Olive Ridley, Green turtle, Loggerhead, Hawksbill, Leatherback.
- The Olive Ridley, Leatherback and Loggerhead are listed as 'Vulnerable' on the IUCN Red List of Threatened Species.
- The Hawksbill turtle is listed as 'Critically Endangered' and the Green Turtle is listed as 'Endangered' on the IUCN Red List of Threatened Species.
- They are protected in Indian Wildlife Protection Act of 1972, under Schedule I.

Punitus Sanctus
- A new freshwater fish has been found in Tamil Nadu.
- Species of Puntius are known from India mainly from the drainages of the Western and Eastern Ghats, as well as the Eastern Himalayas. Sanctus means holy (pilgrim town) in Latin.
- The Punitus genus are a silver-hued fish and shows great species richness in Kerala and Tamil Nadu and known locally as Paral in Kerala and Kende in Tamil Nadu.

Charru Mussel: Invasive Species
- An invasive species named Charru mussel, native to the South and Central American coasts, is spreading quickly in the backwaters of Kerala.
- They may have reached the Indian shores attached to ship hulls or as larval forms in ballast water discharges. Ballast is the seawater that ships carry to improve stability.
- Ashtamudi Lake, a Ramsar site in Kollam district is the worst-hit due to it.
- Externally, it resembles the green and brown mussels (kallummekka in Malayalam), but is much smaller in size. Its colour varies from black to brown, purple or dark green.
- Though this smaller mussel is edible but the proliferation of Charu mussel poses a serious threat to the endemic species diversity of brackish water habitats of Kerala coast.

World Dugong Day 2020
- Every year 28th May is celebrated as World Dugong Day.
- Dugong (Dugong dugon) also called 'Sea Cow' is one of the four surviving species in the Order Sirenia and it is the only existing species of herbivorous (graze on seagrass) mammal that lives exclusively in the sea including in India.
- They are listed as Vulnerable on the IUCN Red List and are protected in India under Schedule I of the Wild (Life) Protection Act, 1972.
- It is estimated that there are only about 200 dugongs in the Gulf of Mannar in Tamil Nadu, the Andaman and Nicobar Islands and the Gulf of Kutch in Gujarat.
One Sun One World One Grid

- India has called for bids to roll-out the ‘One Sun One World One Grid’ (OSOWOG) plan.
- It focuses on a framework for facilitating global cooperation, building a global ecosystem of interconnected renewable energy resources (mainly solar energy) that can be seamlessly shared.
- OSOWOG plan may also leverage the International Solar Alliance (ISA), co-founded by India that has 67 countries as members.
- It has become India’s calling card on climate change and is increasingly being viewed as a foreign policy tool.
- It has been taken up under the technical assistance program of the World Bank.
- The plan has been spread across three phases.
  - The first phase deals with the Middle East and South Asia - India’s neighbourhood-first policy.
  - Second Phase deals with the MESASEA grid getting interconnected with the African power pools.
  - Third Phase is about global interconnection.

3 New Plant Species Discovered In Western Ghats

A team of scientists of the Botanical Survey of India (BSI) have reported the discovery of three new plant species from the Western Ghats in Kerala and Tamil Nadu.

About The New Plant Species

- **Eugenia sphaerocarpa** (Myrtaceae or Rose apple family)
  - Region: Kakkayam area of the Malabar wildlife sanctuary in Kerala above 800 m.
  - The specific epithet ‘sphaerocarpa’ denotes the large, showy lemon-yellow spherical fruits.
  - The fruits of Eugenia species are known for their palatability and many of them are harvested from the wild with some under cultivation.

- **Goniothalamus sericeus** (Annonaceae family of custard apple)
  - Region: Kanyakumari wildlife sanctuary in Tamil Nadu.
  - The specific epithet ‘sericeus’ refers to the presence of dense silky hair on the petals.

- **Memecylon nervosum** (Melastomataceae (Kayamboo or Kaasavu in local parlance) family)
  - Region: Kanyakumari wildlife sanctuary in Tamil Nadu at an altitude between 700-900 m.
  - The epithet ‘nervosum’ alludes to the presence of prominently raised lateral and intramarginal veins on the lower surface of the lamina.
  - The species has showy purplish-blue flowers and mauve to purplish red fruits.
Fall Armyworm (FAW)

- Farmers in Assam reported armyworm attacks on the standing crops.
- Native of the tropical and sub-tropical regions of the Americas, it is a dangerous transboundary insect with a high potential to spread rapidly due to its natural distribution capacity and opportunities presented by international trade.
- Its scientific name, Spodoptera frugiperda, derived from a Latin word ‘frugiperda’ which means lost fruit, is named so because of the species' ability to destroy crops.
- It is polyphagous (ability to feed on different kinds of food) and can spread across large tracts of land as it can fly over large distances.
- India’s tropical climate could allow the pest to thrive and spread further.
- It can be controlled with insecticides (like lambda-cyhalothrin), through natural predators (such as coccinellid beetles which feed on FAW) or by inter-cropping.

Conversion of Surplus Rice to Ethanol

- The government recently allowed the conversion of surplus rice, available with the Food Corporation of India (FCI), to ethanol.
- Ethanol produced from this will be used for utilisation in making alcohol-based hand sanitizers and blending in petrol.
- The National Policy on Biofuels, 2018, states that during an agriculture crop year, when there is projected oversupply of food grains as anticipated by the Ministry of Agriculture and Farmers Welfare, the policy will allow conversion of these surplus quantities of food grains to ethanol.

Fly Ash

- Fly Ash, the after-burnt tiny coal dust, is a by-product from the thermal power plants and is an alumino-silicate non-reactive inert particle which may remain suspended in the air from a few seconds to several months.
- Application: As resource material for many applications of construction industries like in Manufacture of Portland Pozzolana Cement (PPC), or in bricks/blocks/tiles manufacturing, road embankment construction & low-lying area development, in agriculture as soil conditioner etc.

Amendment to Environment Impact Assessment (EIA) Notification 2006

- The Government has amended EIA Notification 2006 to ramp up availability/production of bulk drugs within a short span of time.
- All projects or activities in respect of bulk drugs and intermediates, manufactured for addressing various ailments, have been re-categorized from the existing Category ‘A’ to ‘B2’ category.
- Projects falling under Category B2 are exempted from requirement of collection of Baseline data, EIA Studies and public consultation.
- EIA is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.
Ozone Hole

- European Union’s Copernicus Atmosphere Monitoring Service (CAMS) announced that a hole in the Arctic ozone layer, believed to be the biggest reported, has closed.

- This year (2019-20) the ozone depletion over the Arctic was much larger due to that unusual atmospheric conditions. Cold temperatures (below -80°C), sunlight, wind fields and substances such as chlorofluorocarbons (CFCs) were responsible for the degradation of the Arctic ozone layer.

- Although Arctic temperatures do not usually fall as low as in Antarctica, this year, powerful winds flowing around the North Pole trapped cold air within what is known as the polar vortex—a circling whirlpool of stratospheric winds—causing the massive hole to form. However, its size was still small compared to what can usually be observed in the southern hemisphere.

- Scientists believe that the closing of the hole is because of the same polar vortex and not because of the lower pollution levels during the coronavirus lockdown.

- Ozone hole refers to a region in the stratosphere where the concentration of ozone becomes extremely low in certain months. It is not really a hole.

Devanahalli Chakota

- The Devanahalli pomelo or chakota is the largest citrus fruit in the world and belongs to the Rutaceae family. It has a unique, sweet taste, unlike other varieties.

- It is exclusively grown in the region around Devanahalli taluk, Bangalore Rural District, as an exotic crop variety.

- It is protected under the Geographical Indications of Goods (Registration & Protection) Act (GI Act) 1999.

Trimeresurus Salazar

- A new species of green pit viper found in Arunachal Pradesh.

- Pit vipers are venomous snakes distinguished by their heat-sensing pit organs between the eye and the nostril.

- The new species, Trimeresurus Salazar, is the fifth variety of reptile to have been discovered in Arunachal Pradesh. The name was inspired by Salazar Slytherin, the co-founder of J.K. Rowling’s fictional Hogwarts School of Witchcraft and Wizardry.

Petersberg Climate Dialogue

- Union Environment Minister represented India in the first virtual Climate Dialogue which is the 11th session of Petersberg Climate Dialogue.

- It has been hosted by Germany since 2010 to provide a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action.

- The virtual XI Petersberg Climate Dialogue was co-chaired by Germany and the United Kingdom, the incoming Presidency of 26th Conference of Parties (COP 26) to the United Nations Framework Convention on Climate Change (UNFCCC).
India, while stressing on the issue of **Climate finance**, advocated a plan for **1 trillion USD in grants** to the developing world immediately. She also advocated that the world must think of adopting **more sustainable consumption patterns** in line with requirements of sustainable lifestyles.

**Anthurium**
- Anthuriums are **herbaceous epiphytes native to tropical America**.
- Anthurium varieties are large beautiful flowers, different colors of spathe and spadix, long stalks, **better shelf life** and good market value.
- They **purify the surrounding air** and remove harmful airborne chemicals like formaldehyde, ammonia, toluene, xylene, and allergens.
- Due to its importance in removing toxic substances from the air, NASA has placed it in the list of **air purifier plants**.

**World Earth Day**
- Every year, Earth Day is celebrated on **April 22** all over the world.
- The year **2020 marks the 50th year** of World Earth Day. The **theme** for this year is “Climate Action”.
- The evolution of this day **dates back to April 22, 1970**, when millions of people took to the streets in protest of the negative impacts of 150 years of industrial development.

**Bhagirathi Eco-Sensitive Zone**
The **Ministry of Environment, Forest and Climate Change (MoEF&CC)** informed about approval of the **Zonal Master Plan** for the Bhagirathi Eco-Sensitive Zone that will pave the way for faster execution of **Char Dham Road Project**.

Located in the upper Himalayas in Uttarakhand. Geographically the area falls under the **Garhwal lesser Himalayas and Higher Himalayas**.

**Char Dham Highway**
- Char Dham National Highway is an **under construction all-weather two-lane 900 km National Highway** in the Indian state of Uttarakhand.
- The proposed highway will complement the under-construction Char Dham Railway by connecting the four holy places in Uttarakhand states namely Badrinath, Kedarnath, Gangotri and Yamunotri.

**National Award of Excellence**
- **Kannan C S Warrier** has received the **National Award of Excellence for Outstanding Research in Forestry** for the year 2019.
- The award was conferred on him by the **Indian Council of Forestry Research and Education (ICFRE)** for releasing three productive clones of **casuarina**, known as **kattadi** and **savukku**, that are suitable for salt affected soils for the first time in the country. India has around 6.73 million hectares of salt-affected land.
- Casuarina have a role in **nitrogen fixation in symbiotic association with bacteria Frankia**.
- India is the largest planter of casuarina in the world.
He has also done extensive work on the conservation of endangered sacred groves in Alappuzha district of Kerala.

Sacred groves of India

The Hindu tradition considers forests to be of three types - Tapovan, Mahavan and Sreevan.

1. Tapovan are forests associated with penance (Tapas), and are inhabited by saints and rishis.
2. Mahavan refers to the grand natural forests. Tapovan and Mahavan are considered to be a Raksha ("sanctuary") for flora and fauna as ordinary human beings are not allowed to enter these forests.
3. Sreevan, which means, "forests of prosperity", consists of dense forests and groves.

Sacred groves of India are forest fragments of varying sizes, which are communally protected, and which usually have a significant religious connotation for the protecting community. Hunting and logging are usually strictly prohibited within these patches.

They are part of the in-situ method of conservation of flora, i.e. on-site conservation or the conservation of genetic resources in natural populations of plant or animal species, such as forest genetic resources in natural populations of tree species.

The introduction of the protected area category community reserves under the Wild Life (Protection) Amendment Act, 2002 has introduced legislation for providing government protection to community held lands, which could include sacred groves.

They go by different names in different states.

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<tr>
<td>Andhra Pradesh</td>
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---|---
Orissa | Jahera, Thakuramma
Puducherry | Kovil Kadu
Rajasthan | Oran, Kenkri, Vani, Shamlat deh, Devbani, Jogmaya
Sikkim | Gumpa forests
Tamil Nadu | Kovil Kadu
Uttarakhand | Devbhumi, Baun, Bugyal
West Bengal | Garamthan, Harithan, Jahera, Sabitrithan, Santalburithan

**Bathynomus Raksasa**
- A giant ‘sea cockroach’ has been found by the researchers from Singapore at the **bottom of the Indian Ocean**. It has been described as the ‘**cockroach of the sea**’.
- The newly discovered cockroach has been identified as belonging to a new species and is given the name ‘**Bathynomus raksasa**’.
- The Bathynomus raksasa is a **super-giant isopod** in the genus **Bathynomus**.

**Lonar Lake**
- The **colour of Lonar lake** water in Maharashtra’s Buldhana district turned **pink** due to a large presence of the **salt-loving ‘Haloarchaea’ microbes**, as per probe carried out by Pune-based **Agharkar Research Institute**.
- **Haloarchaea or halophilic archaea** is a bacteria culture which **produces pink pigment** and is found in water saturated with **salt**. It produces a pink pigment; it forms a pink colour mat on the water surface.
- The absence of rain, less human interference and high temperature resulted in the evaporation of water which increased its salinity and **pH**.
- **Initially**, we thought it was because of the red-pigmented **Dunaliella algae** due to which the water might have turned pink.
Recently, the water in the Lonar lake was found to be turning reddish. Algal Bloom, Change in Salinity, Biological Change (due to lockdown) etc. are possible reasons for change.

Lonar lake, a notified National Geo-heritage Monument, believed to have been created over 52,000 years ago when a meteorite hit the Earth.

**Indian Bullfrog**

- The *Indus Valley bullfrog* or *Indian bullfrog*, popularly named as *Asian bullfrog*, is a large species of frog found in mainland Myanmar, Bangladesh, India, Pakistan, Afghanistan, and Nepal and also the largest frog found in the Indian Subcontinent.
- It has been introduced in Madagascar and India's Andaman Islands, where it is now a widespread invasive species.
- Protection Status:
  - IUCN Red List: Least Concern
  - Wildlife (Protection) Act 1972: Schedule IV
- They can be identified by the pointed snout and long hind limbs, which help them jump.
- They are nocturnal and carnivorous and eat other tadpoles (including their own species).

**Pied Cuckoo to be Tracked**

- The Wildlife Institute of India (WII), along with the Indian Institute of Remote Sensing (IIRS) and the Government of India's Department of Biotechnology, has begun a study of the migration of the pied cuckoo from Africa to India and back, by tagging two of the birds with satellite transmitters.
- This is the first study in the country that seeks to trace and observe the migratory routes of the pied cuckoo. It will help gather data and information on climate change.
- The arrival of the pied cuckoos (also called pied crested cuckoo and Jacobin Cuckoo) in the Himalayan foothills has traditionally been seen as heralding the onset of the monsoon.
- The migration study is part of a larger project called the Indian Bioresource Information Network (IBIN) funded by the Government of India's Department of Biotechnology (DBT), which aims to put relevant Indian bioresources information online.
- IUCN Status: Least Concerned

**Dhole**

- Karnataka, Maharashtra and Madhya Pradesh rank high in the conservation of the endangered dhole in India, according to a new study.
● Study was conducted by **Wildlife Conservation Society-India**, the University of Florida, the Wildlife Conservation Trust, and the National Centre for Biological Sciences.

● Dhole (Cuon alpinus), also known as **Asian wild dogs**, is a wild **carnivorous** animal belonging to the canine family, found in Central, South, East Asia, and Southeast Asia.

● Protection Status:
  ○ IUCN Red List: Endangered
  ○ CITES: Appendix II
  ○ Wildlife (Protection) Act 1972: Schedule 2

● India’s first conservation breeding centre for dhole was built at the **Indira Gandhi Zoological Park** (IGZP), Visakhapatnam, **Andhra Pradesh** in 2014.

**KURMA App**

● On May 23, 2020, **World Turtle Day**, a number of conservation agencies launched a citizen science initiative, a **mobile-based application called KURMA**, aimed at turtle conservation.

● Developed by the **Indian Turtle Conservation Action Network (ITCAN)** in collaboration with the **Turtle Survival Alliance-India** and **Wildlife Conservation Society-India**, it not only provides users a database to identify a species but also provides the location of the nearest rescue centre for turtles across the country.

● It serves as a digital database, with a built-in digital field guide **covering 29 species of freshwater turtles and tortoises of India**, and information on turtle identification, distribution, vernacular names, and threats.

**Indian Turtle Conservation Action Network**

The ITCAN was formed to launch citizen-science initiative and to provide a platform to exchange vital information on turtles, and assistance to enforcement agencies, forest departments, etc.

**Turtle Survival Alliance**

● The Turtle Survival Alliance (TSA) was formed in 2001 as an **International Union for Conservation of Nature (IUCN)** partnership for sustainable captive management of freshwater turtles and tortoises.

● The TSA arose in response to the rampant and unsustainable harvest of Asian turtle populations to supply Chinese markets, a situation known as the **Asian Turtle Crisis**.

● It supports projects or programs – **both wild and captive** - that benefit 21 of the World’s 25 Most Endangered Tortoises and Freshwater Turtles.

● TSA has made a bold commitment to **zero turtle extinctions in the 21st century**.

**National Transit Pass System (NTPS)**

● The **Ministry of Environment** launched an **online system, NTPS**, for issuing **transit permits for timber, bamboo and other forest produce**.

● It will make the process of getting **permits faster** and without physically going to forest department offices.

● The pilot project will be functional in **Madhya Pradesh** and **Telangana** for now. The system will be operational in all states by Diwali.
International Tigers day

- The Day is celebrated on 29th July every year to create awareness about tiger conservation.
- The Union Environment Minister released a detailed report of Tiger Census on the eve of Global Tiger Day. With 2,967 tigers (around 1,400 tigers in 2006), India has achieved the target set in the 2010 St Petersburg Declaration of doubling tiger population by 2022 four years in advance.
- During the said meeting it was also decided to celebrate July 29 as Global Tiger Day across the world, which is since being celebrated to spread and generate awareness on tiger conservation.
- There are currently 13 tiger range countries -- India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.

High Levels Of Ammonia In Yamuna Water

- Delhi saw disruption in water supply after high levels of ammonia were detected in the Yamuna river.
- The acceptable maximum limit of ammonia in drinking water, as per the Bureau of Indian Standards, is 0.5 ppm.

Ammonia (NH₃)

- Ammonia is colourless with a distinct odour gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
- Ammonia occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents or through contamination by sewage.
- If the concentration of ammonia in water is above 1 ppm it is toxic to fishes. In humans, long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs.

Bureau of Indian Standards

- The Bureau of Indian Standards is the national Standards Body of India working under the aegis of Ministry of Consumer Affairs, Food & Public Distribution, Government of India.
- It is established by the Bureau of Indian Standards Act, 1986 which came into effect on 23 December 1986.

RAISE Initiative

- The Ministry of Power launched the Retrofit of Air-conditioning to improve Indoor Air Quality for Safety and Efficiency (RAISE) national programme.
- It is a joint initiative of Energy Efficiency Services Limited (EESL) and the U.S. Agency for International Development’s (USAID) MAITREE Program.
- It can potentially alleviate the issue of bad air quality in workspaces across the nation and pioneer ways to make them healthier and greener.

For MAITREE, refer Quick Revision Part 2

EV Charging Plaza

- With a focus on enhancing energy efficiency and promoting e-mobility, the Union Minister for Power, New & Renewable Energy, inaugurated India’s first publicEV (Electric Vehicle) charging plaza at Chelmsford Club in New Delhi.
The EV charging plaza is a new avenue for making e-mobility ubiquitous and convenient in India. Such innovative initiatives are imperative for the creation of a robust e-mobility ecosystem in the country.

Energy Efficiency Services Limited (EESL), in collaboration with New Delhi Municipal Council, has established it.

Animals In Circuses

The Delhi High Court directed the Animal Welfare Board to conduct a nationwide survey to find out the number of animals in circuses, which are unable to perform due to the COVID-19 pandemic, and consider rehabilitating them to the nearest zoos.

The court was hearing a petition by Federation of Indian Animals Protection (FIAPO), which is a collection of 100 organisations working towards the protection of animal rights for over a decade, challenging the constitutional validity of Sections 21 to 27 of the prevention of Cruelty to Animals Act so far as they permit exhibition and training of animals in relation to circus acts.

The petitioners also sought to declare the Performing Animal Rules, 1973 and Performing Animal (Registration) Rules, 2001 to the extent that they allow registration of animals as ‘performing animals’ for circuses as against the Prevention of Cruelty to Animals Act and the Constitution of India.

Global Forest Resources Assessment

The Food and Agriculture Organization (FAO) of the United Nations has brought out the latest Global Forest Resources Assessment (FRA).

FAO has brought out this comprehensive assessment every five years since 1990. This report assesses the state of forests, their conditions and management for all member countries.

The top 10 countries that have recorded the maximum average annual net gains in forest area during 2010-2020 are China, Australia, India, Chile, Vietnam, Turkey, the United States, France, Italy and Romania, according to the FRA 2020.

The Asian continent reported the highest net gain in forest area in 2010-2020, it recorded 1.17 million hectares (ha) per year net increase in forests in the last decade.

However, the South Asia sub-region reported net forest losses during 1990-2020.

India-related Finding

India accounts for two per cent of the total global forest area. India reported 0.38 per cent annual gain in forest, or 266,000 ha of forest increase every year at an average.

The FRA 2020 has credited the government's Joint Forest Management programme for the significant increase in community-managed forest areas in the Asian continent. The forest area managed by local, tribal and indigenous communities in India increased from zero in 1990 to about 25 million ha in 2015.

However, the naturally regenerating forest rate is disappointing, the rate of increase in naturally regenerating forest was just 0.38 per cent.

It is also an indicator of the policies that India is pursuing. India has been taking up massive afforestation and plantation schemes.

The assessment examined employment in the forestry sector (including logging) with data from 136 countries that represent 91 per cent of the world’s forests. India reported the maximum employment in the forestry sector in the world.
Globally, 12.5 million people were employed in the forestry sector. Out of this, India accounted for 6.23 million, or nearly 50 per cent.

**Blue Poppy**
- For the first time, scientists have discovered nearly 70 species of alpine plants, including some rare and endangered species, in the Rohtang area of Manali. Only 50 plant species have been recorded in the area till date.
- Blue poppy is considered the Queen of Himalayan Flowers.
- It is found from Kumaon (Uttarakhand) to Kashmir at elevations of 3,000 to 5,000 meters.

**Green – Ag Project**
- The Union Agriculture Ministry launched the Green-Ag Project in Mizoram, to reduce emissions from agriculture and ensure sustainable agricultural practices.
- The project will be implemented in Dampa Tiger Reserve in west Mizorams.
- Mizoram is among the five states where the Green-Ag project, funded by Global Environment Facility (GEF), is being implemented. The other states are Madhya Pradesh, Odisha, Rajasthan and Uttarakhand.

**Green – Ag: Transforming Indian Agriculture for global environment benefits and the conservation of critical biodiversity and forest landscapes**
It is a Global Environment Facility (GEF) assisted project namely, in collaboration with the Food and Agriculture Organisation (FAO), launched in September, 2018 in high-conservation-value landscapes of five States namely
- a) Madhya Pradesh : Chambal Landscape
- b) Mizoram: Dampa Landscape
- c) Odisha: Similipal Landscape
- d) Rajasthan: Desert National Park Landscape
- e) Uttarakhand: Corbett-Rajaji Landscape.

**Nagarjunasagar Srisailam Tiger Reserve**
- It is the largest tiger reserve in India and spreads over five districts in Andhra Pradesh and Telangana.
- The area consists mostly of the Nallamala Hills and Krishna river cuts the basin of this reserve.
- The multipurpose reservoirs- Srisailam and Nagarjunasagar are located in the reserve.

**Pampa river**
- Pampa River is the third longest river in Kerala after Periyar and Bharathapuzha.
- It originates at Pulachimalai hill in the Peerumedu plateau in the Western Ghats in Kerala and then flows west before emptying into the Vembanad Lake.
● Sabarimala temple dedicated to Lord Ayyappa is located on the banks of the river Pamba.
● The river is also known as ‘Dakshina Bhageerathi’ and ‘River Baris’.

Plastic Waste

● Alliance to End Plastic Waste plans to invest between USD 70 million to 100 million in India over the next five years to majorly reduce plastic waste.
● It was announced on Nature Conservative Day.
● India currently generates around 26,000 tonnes of plastic waste every day, over 10,000 tonnes of which is not collected, data from India Central Pollution Board.
● UN-Habitat Waste Wise Cities (WWC) Tool will be used.

Project Aviral

● It is a project of Alliance To End Plastic Waste and Deutsche Gesellschaft für Internationale Zusammenarbeit (GiZ) to Reduce Plastic Waste in the Ganga.
  ○ It aims to reduce the amount of plastic waste entering the environment in the northern Indian cities of Haridwar and Rishikesh.

UN-Habitat Waste Wise Cities (WWC) Tool

● It is used to map waste flows and assess potential plastic leakage from waste management systems and identify short- and long-term pathways to increase the amount of plastic waste collected, recycled and recovered.

Alliance to End Plastic Waste

● It a Singapore-based-NGO working in the environmental sector
● It was founded in January 2019 as a nonprofit organisation to help solve this serious and complex issue – 8 million tons of plastic waste entering the ocean every year.
● Nearly fifty companies across the plastics value chain have joined the Alliance and together they have committed to invest US$1.5 billion towards solutions that will prevent the leakage as well as recover and create value from plastic waste.

Other Projects of Alliance to End Plastic Waste
  ○ Zero Plastic Waste Cities initiative in India and Vietnam, a combined vision of the Alliance and the Grameen Creative Lab, the creative laboratory for social business solutions co-founded by Nobel Peace Laureate Professor Muhammed Yunus.
  ○ The two initial cities involved in this project are Puducherry on the southeast coast of India and Tan An in the Mekong Delta region of Vietnam.

World Nature Conservation Day

It is observed annually on 28 July to remind humankind about the importance of nature and the need to protect it. The day is marked globally to spread awareness about the best practices to protect the natural resources.

Northern European Enclosure Dam (NEED)

● It is a proposed solution to the problem of rising ocean levels in Northern Europe.
• It would be a megaproject, involving the construction of two massive dams in the English Channel and the North Sea; the former between France and England, and the latter between Scotland and Norway.

• **Scotland - Shetland**: The western section of the North Sea Dam would literally be an island jumping, from mainland Scotland in the southwest, through the Orkney Island to Shetland in the northeast, with a total length stipulated to 145 km.

• **Shetland - Western Norway**: The eastern section stipulated to a length of 331 km through open water and with the sea floor depths exceeding 300 m in the Norwegian trench.

• The concept was conceived by the oceanographers Sjoerd Groeskamp and Joakim Kjellsson.

• However, it is largely a thought experiment intended to demonstrate the extreme cost of engineered solutions to the effects of climate change. The scheme’s authors describe it as “more of a warning than a solution”.

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**Giant Garuda**

Indonesia’s government launched a coastal development project called a Giant Sea Wall or “Giant Garuda” (Garuda is the name of a bird from Hindu mythology and is Indonesia’s national symbol) in 2014 meant to protect the city from floods.

**Hornbill**

• A study based on satellite data has flagged a high rate of deforestation in a major hornbill habitat in Arunachal Pradesh.

• **Papum Reserve Forest (RF)** adjoining **Pakke Tiger Reserve (Pakhui Tiger Reserve)** in Arunachal Pradesh was studied.

• The **hornbills** (*Bucerotidae*) are a family of birds found in tropical and subtropical Africa and Asia.

• India is home to **nine species of hornbills**. The north-eastern region has the highest diversity of hornbill species within India.

• The **great hornbill** is the state bird of Arunachal Pradesh and Kerala.

• The **Hornbill festival celebrated in Nagaland** is named after the bird.

• Protection Status:
  - **IUCN Red List**: nearly 40% species are Globally Threatened or Near Threatened with extinction and rest are **Least Concern**
  - **Wildlife (Protection) Act 1972**: Schedule I
**Papum Reserve Forest (RF)**

- It is an Important Bird and Biodiversity Areas (IBAs) in Arunachal Pradesh.
- It is located between two IBAs, Itanagar Wildlife Sanctuary to the east and Pakke Wildlife Sanctuary to the west.
- Papum Reserve Forest forms part of the Eastern Himalayas Endemic Bird Area. A large part of the site is covered by Subtropical Dry Evergreen and Semi-evergreen Forests, while the higher areas are under Subtropical Broadleaf Hill Forest cover.
- It is a part of the Indo-Burma Biodiversity hotspot in India.

**World Elephant Day**

- World Elephant Day — a day dedicated to the largest mammal on land- is commemorated on 12th August every year.
- It was launched in 2012 to bring attention to the urgent plight of Asian and African elephants.
- African elephants are listed as "Vulnerable" and Asian elephants as "Endangered" on the IUCN Red List of threatened species.
- **Project Elephant**: Government of India launched it as a centrally sponsored scheme in 1992 for the protection of elephants, their habitats and corridors.
- A national web portal on human-elephant conflict - called Surakhsya - for managing the conflicts on a real time basis was also launched on the occasion.
- Elephants are the Natural Heritage Animal of India. India has the largest number of wild Asian Elephants, about 60% of the species’ global population.
- Indian Elephants are included in list of the Appendix I of the Convention of the Migratory species in the recently concluded Conference of Parties of CMS 13 at Gandhi Nagar, Gujarat in February 2020.
  - India is home to the second highest number of elephants used in tourism in Asia; and of the 21 venues housing 509 elephants, the report found that 45 per cent (225) of the elephants were kept in severely inadequate conditions.
  - Over 3,800 elephants are captive in over 357 Asian Elephant Tourism sites. Thailand is home to three-quarters of these elephants.

**Managing Human-Elephant Conflict : Best Practices**

- The Ministry of Environment, Forest and Climate Change has compiled the best practices of human-elephant conflict management in India and released the document to mark World Elephant Day.
- The majority of existing prevention strategies are driven by site-specific factors that offer short-term solutions; many interventions adopted have resulted in successfully removing elephants from human habitations.
- Over 500 humans are killed in encounters with elephants annually, and crops and property worth millions are also damaged. Many elephants are also killed in retaliation due to conflict.
● These best practices have been discussed under several categories such as retaining elephants in their natural habitats by creating water sources and management of forest fires.

● Other Best practices
  ○ Elephant-proof trenches in Tamil Nadu,
  ○ Hanging fences and rubble walls in Karnataka,
  ○ Use of chili smoke in north Bengal,
  ○ Playing the sound of bees or carnivores in Assam
  ○ An elephant corridor initiative where 25.37 acres of private land was purchased at Edayarahalli-Doddasampige in Karnataka as part of conservation efforts.
  ○ Use of technology: Identification and monitoring of elephants in south Bengal, SMS alerts to warn of elephant presence

Seed-Bombs
● Encouraged by germination and subsequent growth in bamboo plantations, Odisha’s Athagarh Forest Division has begun casting seed balls inside different reserve forest areas to enrich food stock for wild elephants.
● The growth in bamboo plantations is expected to meet the needs of the elephants, which often stray out of the forests and raid human habitations.
● A seed bomb is a little ball generally made up of a combination of compost, clay and seeds.

Initiatives of Other States:
● Udaipur has been chosen for experimenting the seed bombing technique to increase forest cover in Rajasthan.
● The Haryana government has done aerial seeding techniques to improve green cover in the Aravalli area of the State.

Lead Pollution
● It states that around one in three children has blood lead levels at or above five micrograms per decilitre (µg/dL). Out of the 800 million children worldwide that are suffering from lead poisoning, nearly half of them are in South Asia.
● Lead poisoning is affecting children on a “massive and previously unknown scale”.
● Lead is a potent neurotoxin that causes irreparable harm to children’s brains. It has also been linked to mental health and behavioural problems and an increase in crime and violence.
● Lead in the blood can damage red blood cells and limit their ability to carry oxygen to the organs and tissues that need it, causing anaemia. It can also affect bones, interfering with the absorption of calcium that bones need to grow healthy and strong.
● The Global Alliance to Eliminate Lead Paint is a cooperative initiative jointly led by the World Health Organization and the United Nations Environment Programme to focus and catalyze the efforts to achieve international goals to prevent children’s exposure to lead from paints containing lead and to minimize occupational exposures to lead paint.
**Leopard Sightings**

- As part of its global tiger census, the Wildlife Institute of India (WII) is set to release a dedicated report on leopard sightings by the August-end.
- The last formal census on India’s leopards was conducted in 2014 which estimated the cat’s population at between 12,000 and 14,000. They also estimated 8,000 leopards in the vicinity of tiger habitat.
- The quadrennial tiger survey also estimates the population of other animals including leopards by relying on camera trap images.
- Conducting a leopard (Panthera pardus) survey, along with the tiger survey, is problematic as the former is adapted to living on the edge of forests and human habitats, unlike the tiger which is an elusive creature. This had led to gross errors in estimating the true numbers of leopards.
- Protection Status:
  - IUCN Red List: Vulnerable
  - CITES: Appendix I
  - Wildlife (Protection) Act 1972: Schedule I

**Leopard Poaching**

- TRAFFIC India has studied the seizure and mortality of ‘common leopards’ and released a paper titled ‘SPOTTED’ in Illegal Wildlife Trade: A Peek into Ongoing Poaching and Illegal Trade of Leopards in India’.
- Of the total of 747 leopard deaths between 2015-2019 in India, 596 were linked to illegal wildlife trade and activities related to poaching and highest numbers of poaching incidents were reported from the States of Uttarakhand and Maharashtra.
- Among all the derivatives found in illegal wildlife trade, skin remained the most in-demand product, accounting for 69% of all seizures, while derivatives like claws, teeth and bones were also traded.

**Pangolin**

- Though many thinks of them as reptiles, pangolins are actually mammals.
- They are the only mammals wholly-covered in scales and they use those scales to protect themselves from predators in the wild. If under threat, a pangolin will immediately curl into a tight ball and will use their sharp-scaled tails to defend themselves.
- According to CITES, it is also the most illegally traded vertebrate within its class (Mammalia).
- Eight species of pangolins are found on two continents. They range from Vulnerable to Critically Endangered.
- Four species live in Africa:
  - Black-bellied pangolin (Phataginus tetradactyla),
  - White-bellied pangolin (Phataginus tricuspis),
  - Giant Ground pangolin (Smutsia gigantea) and
  - Temminck’s Ground pangolin (Smutsia temminckii).
The four species found in Asia:
- Indian pangolin (Manis crassicaudata),
- Philippine pangolin (Manis culionensis),
- Sunda pangolin (Manis javanica) and
- Chinese pangolin (Manis pentadactyla)

Two are found in India. They are Chinese pangolin, mostly found in northeast India and Indian pangolin.

Protection Status:
- IUCN Red List: Chinese pangolin “critically endangered” and Indian pangolin “endangered”
- Wildlife (Protection) Act 1972: Schedule I

Environmental Impact Assessment (EIA) notification 2020/ Draft EIA notification
- It seeks to replace the EIA 2006.
- EIA is statutorily backed by the Environment Protection Act (EPA), 1986 which contains various provisions on EIA methodology and process and EPA, 1986 gives power to the central government to take all such measures for “protecting and improving the quality of the environment.

Key Points of EIA Notification 2020
- The new draft allows for post-facto approval for projects. A project that is already operating in violation of the EPA can now apply for clearance.
  - The Supreme Court noted in a 1 April judgement that, “The concept of an ex post facto EC (environmental clearance) is in derogation of the fundamental principles of environmental jurisprudence.”
  - Post facto approval is the derogation of the fundamental principles of environmental jurisprudence and violation of the “precautionary principle,” which is a principle of environmental sustainability.
- The draft notification reduced the time period from 30 days to 20 days for the public to submit their responses during a public hearing for any application seeking environmental clearance.
- The 2006 notification required that the project proponent submit a report every six months, the new draft requires to submit a report only once every year.
- The new draft also exempts a long list of projects outside the purview of the EIA, including any project the government labels as “strategic”. The exempt list also includes all inland waterways and national highways projects.
- Construction projects of up to 150,000 sq. m shall be exempt from EIAs, earlier it was 20,000 square metres.

Tanystropheus
- A recent study has unveiled fresh details surrounding the Tanystropheus, that lived on Earth some 242 million years ago and had a remarkably elongated neck – longer than its body and tail combined.
- Tanystropheus, a reptile, are believed to have lived around the Monte San Giorgio basin on the Swiss-
Italian border during the middle Triassic period (247-237 million years ago), and were originally mistaken to be a kind of Pterosaur – a flying reptile.

- Researchers concluded that Tanystropheus was a “ram-feeder”, its long neck allowing it to approach unknowing prey and then use its fang-like teeth to directly snap a bit off its prey.

**Environmental Emergency**

Mauritius has declared a "state of environmental emergency" and asked France for help after an oil spill from a Japanese-owned ship near vulnerable waters.

**National Parks in News**

**Kaziranga National Park**
- Kaziranga National Park is a protected area in the northeast Indian state of Assam.
- Spread across the floodplains of the Brahmaputra River, its forests, wetlands and grasslands are home to tigers, elephants and the world’s largest population of Indian one-horned rhinoceroses.
- Ganges River dolphins swim in the park's waters. It's visited by many rare migratory birds, and gray pelicans roost near Kaziranga village.
- It was declared as a National Park in 1974; tiger reserve in 2007; UNESCO World Heritage Site in 1985 and An Important Bird Area by BirdLife International.

**Nagarhole National Park**
- The Karnataka Forest Department decided to put in place a traffic monitoring mechanism along the roads adjacent to Nagarhole National Park to ensure better compliance of forest laws by motorists and minimise road kills.
- Nagarhole National Park, also known as Rajiv Gandhi National Park, is a wildlife reserve in the South Indian state of Karnataka.
- Part of the Nilgiri Biosphere Reserve, the park is backed by the Brahamagiri Mountains and filled with sandalwood and teak trees.
- The Kabini River passes through jungle landscapes and it is home to tigers, Asian elephants and a variety of birds.
- In 1999 it was declared as Tiger Reserve.

**Dehing Patkai Wildlife Sanctuary**
- The Assam government has decided to upgrade Dehing Patkai Wildlife Sanctuary, also known as the Jeypore Rainforest, into a National Park.
- While the first proposal to accord national park status to the region dates back to 1995, Dehing Patkai was declared a wildlife sanctuary in 2004.
- The 111.942 sq km Dehing Patkai Wildlife Sanctuary is located within the larger Dehing Patkai Elephant Reserve, which spreads across the coal- and oil-rich districts of Upper Assam (Dibrugarh, Tinsukia and Sivasagar) and is believed to be the last remaining contiguous patch of lowland rainforest area in Assam.
- Dehing is the name of the river that flows through this forest and Patkai is the hill at the foot of which the sanctuary lies.
The oldest refinery of Asia in Digboi and ‘open cast’ coal mining at Lido are located near the sanctuary.

Post upgradation, Dehing Patkai will be the sixth national park in Assam — the other five being Kaziranga, Nameri, Manas, Orang and Dibru-Saikhowa.

Ranthambore Tiger Reserve
- It lies in the eastern part of Rajasthan state, at the junction of the Aravalis and Vindhya hill ranges.
- It was established initially as Sawai Madhopur Game Sanctuary in 1955 by the Government of India and declared a Tiger Reserve in 1973 and a national park in 1980.

Rajaji National Park
- It is an Indian national park and tiger reserve that encompasses the Shivaliks, near the foothills of the Himalayas. The park is spread over 820 km², and three districts of Uttarakhand: Haridwar, Dehradun and Pauri Garhwal.
- The Ganga and Song rivers flow through the park.
- Rajaji National Park has been named after C.Rajagopalachari (Rajaji), a prominent leader of the Freedom Struggle, the second and last Governor-General of independent India and one of the first recipients of India's highest civilian award Bharat Ratna (in 1954).
- In 2015, Rajaji became the second tiger reserve in Uttarakhand.
  - Jim Corbett National Park is the first National Park of Uttarakhand as well as of India.
- It is home to the Van Gujjars tribes in the winters. The tribe is one of the few forest-dwelling nomadic communities in the country.
- Usually, they migrate to the bugyals (grasslands) located in the upper Himalayas with their buffaloes and return only at the end of monsoons to their makeshift huts, deras, in the foothills. The Van Gujjars traditionally practice buffalo husbandry; a family owns up to 25 heads of buffaloes.

Tillari Conservation Reserve
- The Maharashtra government declared the Tillari forest area in the Dodamarg and Sawantwadi range in coastal Sindhudurg district as a conservation reserve area.
- It is located near the border of Maharashtra, Goa and Karnataka, connecting Mhadei sanctuary in Goa and Bhimgad in Karnataka.
- Tillari reserve has semi-evergreen forest, tropical moist deciduous forests, and a number of unique trees, butterflies, and flowers.
- The area covering nine villages in the forest range is known to serve as a corridor and even as a habitat for the population of tigers and elephants moving between the three states of Goa, Karnataka, and Maharashtra.
- Tillari will be the seventh corridor in the state to be declared as a ‘conservation reserve’
- Maharashtra has 62 conservation reserves, of which 13 are in the western ghats.

Melghat Tiger Reserve
- The Maharashtra Government requested the Union government for an alternate alignment for the proposed upgradation of the railway line passing through Melghat Tiger Reserve (MTR).
- It is located in Amravati district of Maharashtra in Vidarbha region in the South-western Satpura mountain ranges bordering Madhya Pradesh in the North and East. The Tapti River and the Gawilgadh ridge of the Satpura Range form the boundaries of the reserve.
- Melghat means 'meeting of the ghats', which describes the area as a large tract of unending hills and ravines scarred by jagged cliffs and steep climbs.
- Melghat was declared a tiger reserve and was among the first nine tiger reserves notified in 1973-74 under the Project Tiger and first Tiger Reserve to be declared in the State of Maharashtra.
- In 1985, Melghat Wildlife Sanctuary was created. It consists of Gugamal National Park, Wan, Ambawarba and Narnala sanctuaries.
Cyclone Nisarga

- **Severe Cyclonic Storm Nisarga** was the strongest tropical cyclone to strike the Indian state Maharashtra in the month of June since 1891. It was also the first cyclone impact to Mumbai since Cyclone Phyan of 2009.
- Nisarga originated as a depression in the Arabian Sea and moved generally northward.
- Nisarga was the second cyclone to strike the Indian subcontinent within two weeks, after Cyclone Amphan, the first super cyclonic storm to have formed in the Bay of Bengal in the 21st century, devastated the state of West Bengal in May 2020.
- The name ‘Nisarga’ has been suggested by Bangladesh.
- Cyclones formed in the Bay of Bengal are stronger than those on the Arabian Sea side. The relatively cold waters of the Arabian Sea discourage the kind of very strong cyclones that are formed on the Bay of Bengal side.

Kohala Hydropower Project

- **China** under the multi-billion-dollar CPEC (China-Pakistan Economic Corridor) will set up a 1,124-megawatt power project in Pakistan-occupied Kashmir despite India’s objection to it.
- The project will be built on the Jhelum River and aims at annually providing more than five billion units of clean and low-cost electricity for consumers in Pakistan.

Tropical Storm Cristobal

**Tropical Storm Cristobal** formed in the southern Gulf of Mexico in June 2020, threatening to bring deadly flooding in parts of southern Mexico and Central America.

Gulf of Mexico

- The Gulf of Mexico is an ocean basin and a marginal sea of the Atlantic Ocean, largely surrounded by the North American continent.
- It is bounded on the northeast, north and northwest by the Gulf Coast of the United States, on the southwest and south by Mexico, and on the southeast by Cuba.

Amery Ice Shelf

- The National Centre for Polar and Ocean Research (NCPOR) predicts that there would be a 24% increase in the expansion of Amery Ice Shelf (AIS) boundaries by 2021 and another 24% expansion by 2026 from its 2016 positions.
Ice shelves are permanent floating sheets of ice that connect to a landmass.

The AIS is one of the largest glacier drainage basins in the world, located on the east coast of Antarctica, at about 70ºS Latitude, 70ºE Longitude.

The AIS dynamics and mass balance help in understanding the changes in the global climate scenario.

NCPOR carried out this study based on the satellite data collected from 2001 to 2016.

The data were collected during the austral (relating to the southern hemisphere) summer months of January to March to understand the advancement of AIS extension and the influence of ocean atmospheric forcing in East Antarctica.

The NCOIOR scientists observed a spatio-temporal change in the ice shelf as reflected by the extension of the Pridze and Mackenzie and the extension of a 200-km stretch between Mackenzie Bay (68.5ºS Longitude; 70.2ºE Longitude) and the Sandefjord Bay (69.65ºS Longitude; 74.3ºE Longitude), which is a part of the AIS.

Presena Glacier

A team of conservationists has begun the process of laying vast tarpaulin sheets to cover over 100,000 sq metres of the Presena glacier in Northern Italy to prevent it from melting due to global warming. The six-week process is repeated every year once the ski season is over and summer begins in full force.

The conservation project was first undertaken in 2008 — at which time only 30,000 sq metres of the glacier was covered.

The process of removing the protective tarps will begin in September and will take six months.

Glacier is situated between the Lombardy and Trentino Alto Adige regions (altitude around 2,700-3,000 metres) in Northern Italy, the glacier is part of the Presanella mountain (Alps) group.

Pink snow was also observed, in July 2020, on parts of the Presena glacier believed to be caused by a plant that makes the ice darker, causing it to melt faster.

- The plant, known as Ancylonema nordenskioeldii, is present in Greenland’s so-called Dark Zone, where the ice is also melting.

- Normally ice reflects more than 80% of the sun’s radiation back into the atmosphere, but as algae appear, they darken the ice so that it absorbs the heat and melts more quickly.

Adamello-Presanella Alps

The Adamello-Presanella Alps Alpine group is a mountain range in the Southern Limestone Alps mountain group of the Eastern Alps. It is located in northern Italy, in the provinces of Trentino and Brescia. The name stems from its highest peaks: Adamello and Presanella.

Athirapally Hydel Electric Project

The Kerala government has proposed 163-megawatt (MW) Athirappilly HydroElectric Project (AHEP) on the Chalakudy river in Thrissur district.

- Chalakudy River originates in the Anamalai region of Tamil Nadu, its major tributaries are Parambikulam, Sholayar, Kuriyarkutti, Karapara and Anakayam in Kerala.

- The famous waterfalls on this river are Athirappilly Falls and Vazhachal Falls. It merges with the Periyar River in Ernakulam district.
• There are already five dams for power and one for irrigation and it will be the seventh along the 145 km course of the Chalakudy river.

Mont Blanc

• Mont Blanc (meaning "White Mountain") is the second-highest mountain in Europe after Mount Elbrus. It is the highest mountain in the Alps and Western Europe.
• It rises 4,808 m (15,774 ft) above sea level and is ranked 11th in the world in topographic prominence.
• The mountain stands in a range called the Graian Alps, between the regions of Aosta Valley, Italy, and Savoie and Haute-Savoie, France.

Earthquake In India

• Frequent tremors of the earthquake had occurred in Delhi-NCR and nearby regions in June-July.
• An earthquake is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

Measurement of Earthquake

• The instrument which is sensitive to the seismic waves and helps to measure the intensity of the earthquake is called Seismograph.
• There are different scales that are used to measure the intensity of earthquakes namely: Rossi-Forel Scale, Mercalli Scale, and Richter Scale.
• The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the earthquake, which is expressed in absolute numbers, 0-10.
• The intensity scale or Mercalli scale considers the visible damage caused by the event. The range of intensity scale is from 1-12.
• The lines joining the regions of same seismic intensity are called Isoseismal lines and the lines joining the places which experience the tremors of the earthquake at the same time are known as Homoseismal lines.

Earthquake (Seismic) Zones in India

• There are four seismic zones (II, III, IV, and V) in India based on scientific inputs relating to seismicity, earthquakes occurred in the past and tectonic setup of the region.
• Previously, earthquake zones were divided into five zones with respect to the severity of the earthquakes but the Bureau of Indian Standards (BIS) grouped the country into four seismic zones by unifying the first two zones.
• Earthquake zone V is the most vulnerable to earthquakes, where historically some of the country’s most powerful shocks have occurred. It has magnitudes in excess of 7.0.
Great Oxidation Event

- The Great Oxidation Event (GOE), sometimes also called the Great Oxygenation Event, Oxygen Catastrophe, Oxygen Crisis, Oxygen Holocaust, or Oxygen Revolution, was a time period when the Earth’s atmosphere and the shallow ocean experienced a rise in oxygen, approximately 2.4 billion years ago (2.4 Ga) to 2.1–2.0 Ga during the Paleoproterozoic era.
- Geological, isotopic, and chemical evidence suggests that biologically produced molecular oxygen (dioxygen, O₂) started to accumulate in Earth’s atmosphere and changed Earth’s atmosphere from a weakly reducing atmosphere to an oxidizing atmosphere, causing many existing species on Earth to die out.
- The cyanobacteria producing the oxygen caused the event which enabled the subsequent development of multicellular forms.[6]

Disaster Management Act

- The nationwide lockdown was imposed to combat the COVID-19 pandemic under the Disaster Management Act, 2005, invoked for the first time in the country since the legislation was drafted after the tsunami in 2004.
- COVID-19 is the first pan India biological disaster being handled by the legal and constitutional institutions of the country.
- Under the Act, the States and district authorities can frame their own rules based on broad guidelines issued by the Union Home Ministry.
- The legal basis of the DM Act is Entry 23, Concurrent List of the Constitution “Social security and social insurance”.
- Entry 29, Concurrent List “Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting men, animals or plants,” can also be used for specific law making.
- The Act calls for the establishment of National Disaster Management Authority (NDMA), with the Prime Minister of India as chairperson.

Neradi Barrage over Vamsadhara River

- The Andhra Pradesh Government planned to build the Neradi bridge across the Vamsadhara river but disputed due to Odisha’s concern.
- Earlier, The Vamsadhara Water Dispute Tribunal directed Andhra Pradesh and Odisha to carry out a joint survey for identifying 106 acres of land in Odisha for the construction of Neradi barrage across the river

Vamsadhara River

- River Vamsadhara is an important east flowing river between Rushikulya and Godavari, in Odisha and Andhra Pradesh states.
- It originates in Odisha and ends in the Bay of Bengal at Kalingapatnam(Andhra Pradesh).
- Mahendratanaya River is a major tributary.
Decommissioning Request of the Ithai Barrage

- The Manipur government is seeking a review of the Loktak Hydropower project and removal of the Ithai Barrage.
- It was constructed in 1983 to act as an artificial reservoir to maintain sufficient water volume in Loktak lake for the continuous generation of hydropower.
- The dam has affected the hydrology of the lake and caused harm to the ecology and economy of the region.

Operation Meghdoot

- On April 13, the Indian Army observed the 36th Siachen Day, remembering the gallant martyrs of Siachen to commemorate the courage and fortitude displayed by troops of the Indian Army in securing the highest and coldest battlefield in the world.
- On April 13, 1984, the Indian Army launched "Operation Meghdoot" to secure Bilafond La and other passes on the Saltoro Ridgeline from Pakistani aggression.
- The conflict began when Pakistan allowed Japanese expedition to scale Rimo I (an important peak in the region) in 1984.
- Siachen lies in the Karakoram Range in North-West India. Siachen Glacier is 76.4 km long and covers about 10,000 sq km of uninhabited terrain. The Siachen Glacier's melting waters are the main source of the Nubra River in the Indian region of Ladakh, which drains into the Shyok River.

Project Chetak

The Border Roads Organisation (BRO) has constructed a permanent bridge on river Ravi under Project Chetak, which connects Kasowal enclave in Punjab to the rest of the country.

About Ravi river

- The Ravi was known as Parushani or Iravati to Indians in Vedic times and Hydraotes to the Ancient Greeks.
- It originates in the Himalayas in the Chamba district of Himachal Pradesh following a north-westerly course.
- It turns to the south-west, near Dalhousie, and then cuts a gorge in the Dhaola Dhar range entering the Punjab plain near Madhopur.
- It then flows along the Indo-Pak border for some distance before entering Pakistan and joining the Chenab River.

Etalin Hydroelectric Project

- Some conservationists and former members of the National Board of Wildlife (NBWL) have sought rejection of approval for the Etalin Hydroelectric Project in the Dibang Valley, Arunachal Pradesh.
- The Project is based on the river Dibang and envisages construction of two dams over the tributaries of Dibang: Dir and Tangon.
- Dibang is a tributary of the Brahmaputra river which flows through the states of Arunachal Pradesh and Assam.
Daporijo Bridge
Daporijo Bridge over Subansiri River has been constructed by Border Roads Organisation (BRO), to connect strategic Line of Communication in Arunachal Pradesh.

Subansiri River
- The Subansiri River, also known as the Gold River, is the largest tributary of the Brahmaputra River in the Indian states of Assam and Arunachal Pradesh.
- It originates in the Himalayas in China and flows into India and joins the Brahmaputra River.

Nag River
- The Bombay High Court observed that the Nag river has become extremely polluted due to industrialisation and urbanisation.
- Nagpur (Maharashtra) city derives its name from the Nag river which flows through it.
- It Forms a part of the Kanhan-Pench river system, and originates in Lava hills near wadi.
- Pili river is its major tributary and it ends with confluence of Kanhan River.

Bihad Area in Gwalior—Chambal Region
- The Centre, in collaboration with the World Bank, has decided to convert a large area of ravines in Gwalior-Chambal belt of Madhya Pradesh into arable land.
- More than 3 lakh hectares of rugged land is not cultivable and if this area is improved, then this will help in the integrated development of the Bihad area.
- The project will not only help in improving agricultural development and environment but will also create employment opportunities and lead to substantive development of the region.
- The Chambal Expressway will also be built and will pass through this area.
- The Chambal-Gwalior ravines that consist of sharp, steep, mud hillocks stretch across three States — Madhya Pradesh, Rajasthan and Uttar Pradesh. Bihad areas of Chambal-Gwalior belt is a unique geographical feature having gullies up to 15-20 feet deep.

Ravine
- A ravine is a landform that is narrower than a canyon and is often the product of streambank erosion. They are typically classified as larger in scale than gullies, although smaller than valleys.
- It is generally a fluvial slope landform of relatively steep (cross-sectional) sides, on the order of twenty to seventy percent in gradient.

Kutch Mainland Fault (KMF)
- A recent study has suggested that the Kutch Mainland Fault (KMF), which has been dormant for the last 1,000-odd years, has been accumulating stress within and could trigger an earthquake.
- KMF is the major east-west trending fault. The fault line extends for over 150 km from Lakhpat to Bhachau (Gujrat).
- The study also gives evidence that there were four major earthquakes on KMF between 5600 and 1000 BP (before present), a time scale used by geologists to define events that happened before the origin of radiocarbon dating technology in the 1950s.
The fragile crust of Kutch holds four major active faults which frequently liberate energy in the form of earthquakes.

The devastating January 26, 2001 earthquake had occurred from the South Wagad fault system (at the Kachchh Rift Basin).

Hajigak Mines

In 2011, a consortium of seven Indian companies led by Steel Authority of India Limited had also successfully bid for mining rights at Hajigak mines in Afghanistan that contain large reserves of iron ore.

Hajigak Mine is the best known and largest iron oxide deposit in Afghanistan, located near the Hajigak Pass, with its area divided between Maidan Wardak and Bamyan provinces. It has the biggest untapped iron ore deposits of Asia.

Azad Pattan Hydel Power Project

Azad Pattan and Kohala Hydropower Projects are the two projects that will be built on Jhelum River in PoK (Pakistan Occupied Kashmir) Pakistan and China.

These are among five hydropower schemes on the Jhelum. Upstream from Azad Pattan are the Mahl, Kohala, and Chakothi Hattian projects; Karot is downstream. Like Kohala and Azad Pattan, Karot also is being developed under the CPEC framework.

China–Pakistan Economic Corridor (CPEC)

CPEC is a collection of infrastructure projects that are under construction throughout Pakistan since 2013.

- It is a part of the Belt and Road Initiative

On 13 November 2016, CPEC became partly operational when Chinese cargo was transported overland to Gwadar Port for onward maritime shipment to Africa and West Asia, while some major power projects were commissioned by late 2017.

Belt and Road Initiative

The Belt and Road Initiative (BRI, or B&R), formerly known as One Belt One Road (OBOR), is a global infrastructure development strategy adopted by the Chinese government in 2013 to invest in nearly 70 countries and international organizations.

It is considered a centerpiece of Chinese Communist Party general secretary Xi Jinping's foreign policy, he originally announced the strategy during official visits to Indonesia and Kazakhstan in 2013.

"Belt" refers to the overland routes for road and rail transportation, called "the Silk Road Economic Belt"; whereas "road" refers to the sea routes, or the 21st Century Maritime Silk Road. It was incorporated into the Constitution of the People’s Republic of China in 2017.
- The project has a **target completion** date of **2049**, which coincides with the 100th anniversary of the People's Republic of China.

**Agatti Island**
- Agatti Island is a **7.6 km long island**, situated on a **coral atoll called Agatti atoll** in the Union Territory of Lakshadweep, India.
- It is situated at a distance of **459 km (248 nautical miles)** from Kochi (Kerala) and is located to the west of Kavaratti Island (capital of Lakshadweep).
- Fishing is the most important industry of Agatti and it receive surplus fish. Next to fishing, coir (coconut fibre) and copra (dried meat or kernel of the coconut) are the main industries.

**Kerala Landslide**
- At least 18 persons were killed and 52 others are missing after a series of landslides at the **Nayamakkad tea estate** at Pettimudy, near Rajamala in Idukki district, Kerala.
- Four **layams (housing lines of tea garden workers)** were also buried.
- The **Nayamakkad estate** is located about 30 km from Munnar, adjacent to the Eravikulam National Park (ENP), and can be accessed through the national park.
- The term **landslide or less frequently, landslip**, refers to several forms of mass wasting that include a wide range of ground movements, such as rock falls, deep-seated slope failures, mudflows, and debris flows.
- Landslides are a type of **mass wasting** (a geomorphic process) which denotes any down-slope movement of soil and rock under the direct influence of **gravity**.
- The **National Institute of Disaster Management (NIDM) (under the Ministry of Home Affairs)** organized the **1st International Conference on “Landslides Risk Reduction and Resilience”** on 28th November, 2019 in New Delhi.

**Hurricane Hanna**
- Hanna reached wind speeds of up to 90 mph. The hurricane is expected to produce heavy rains across portions of southern Texas and northeastern **Mexico**, which will result in **“life-threatening”** flash flooding and isolated minor to moderate river flooding.
- It has been categorised as a **Category 1 storm on the Saffir–Simpson hurricane wind scale (SSHWS)**.
- Tropical cyclones or hurricanes use **warm, moist air as fuel** and therefore form over warm ocean waters near the equator. When the warm, moist air rises upward from the surface of the ocean, it
creates an area of **low air pressure** below. When this happens, the air from the surrounding areas, which has higher pressure, enters this space, eventually rising when it becomes warm and moist too.

**Naming of Cyclones**

- Since 1953, Atlantic tropical storms have been named according to lists by the **National Hurricane Center (NHC)**.
- In 1978, it was decided that the NHC will use **alternating men and women’s names**, on the lines of the practice adopted by Australia’s bureau of meteorology three years earlier in 1975.
- These names are maintained and updated by an international committee of the **World Meteorological Organisation (WTO)**. The WTO represents over 120 countries and uses **predetermined** lists of names for each ocean basin of the world.
- There are **six such lists of names with 21 names** each (each starting with one alphabet except Q, U, X, Y and Z because names beginning with these letters are in short supply) that are **used in rotation**, which is to say that the list of names attributed to Atlantic tropical storms in 2019 will also be used in 2025.
- However, names of storms that caused **particular damage and deaths are retired** and in case there are more storms than names in the list, NHC names them using the Greek alphabet. Some of the retired names include **Erika (2015), Irma (2017) and Florence (2018)** among several others.
- Further, the only time that a storm may be renamed is when it dissipates to a tropical disturbance and reforms.
- Adopting names for tropical storms makes it easier for people to remember, as opposed to numbers and technical terms. Apart from the general public, it also helps the scientific community, the media, disaster managers etc.

**Saffir–Simpson scale**

- The **Saffir–Simpson hurricane wind scale (SSHWS)**, formerly the **Saffir–Simpson hurricane scale (SSHS)**, classifies hurricanes – Western Hemisphere tropical cyclones – that exceed the intensities of tropical depressions and tropical storms – into **five categories** distinguished by the intensities of their sustained **winds**.
- The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane’s sustained wind speed. This scale estimates potential property damage.

<table>
<thead>
<tr>
<th>Category</th>
<th>Sustained Winds</th>
<th>Types of Damage Due to Hurricane Winds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>119-153 km/h</td>
<td>Very dangerous winds will produce some damage</td>
</tr>
<tr>
<td>2</td>
<td>154-177 km/h</td>
<td>Extremely dangerous winds will cause extensive damage</td>
</tr>
<tr>
<td>3(major)</td>
<td>178-208 km/h</td>
<td>Devastating damage will occur</td>
</tr>
<tr>
<td>4(major)</td>
<td>209-251 km/h</td>
<td>Catastrophic damage will occur</td>
</tr>
<tr>
<td>5(major)</td>
<td>252 km/h or higher</td>
<td>Catastrophic damage will occur</td>
</tr>
</tbody>
</table>
Tuting-Tidding Suture Zone (TTSZ)

- The Tuting-Tidding Suture Zone (TTSZ) is a major part of the Eastern Himalaya, where the Himalaya takes a sharp southward bend and connects with the Indo-Burma Range.
- This part of the Arunachal Himalaya has gained significant importance in recent times due to the growing need of constructing roads and hydropower projects, making the need for understanding the pattern of seismicity in this region critical.

Tsunami Ready

- The Odisha State Disaster Management Authority (OSDMA), Odisha has now implemented the Tsunami Ready programme in two villages viz.,
  a) Venkatraipur in Ganjam District,
  b) Noliasahi in Jagatsingpur District.
- With this recognition, India is the first country to implement Tsunami Ready in the Indian Ocean Region and Odisha is the first state.
- Tsunami Ready is a community performance-based programme initiated by the Intergovernmental Oceanographic Commission (IOC) of UNESCO to promote tsunami preparedness through active collaboration of public, community leaders, and national and local emergency management agencies.
- The main objective of this programme is to
  o Improve coastal community’s preparedness for tsunami emergencies,
  o Minimize the loss of life and property
  o Ensure a structural and systematic approach in building community preparedness
  o Fulfilment of the guidelines ensures communities have a strong end-to-end tsunami early warning and mitigation system with a particular focus on community awareness and preparedness to respond.

Indian National Centre for Ocean Information Services (INCOIS)

- INCOIS is an autonomous organization, established in 1999, of the Government of India, under the Ministry of Earth Sciences, located in Hyderabad.
- It is a unit of the Earth System Science Organization (ESSO).
- ESSO- INCOIS is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focussed research.
- The Indian Tsunami Early Warning Centre (ITEWC), INCOIS is the nodal agency to provide tsunami advisories to India.
- INCOIS is also providing tsunami advisories to Indian Ocean region (25 countries) as a Tsunami Service Provider as the responsibility assigned by IOC-UNESCO.
- ITEWC at INCOIS also conducts IOWave Tsunami mock exercises biannually.
- To implement and monitor the implementation of Tsunami Ready and IOWave Exercises in India, Ministry of Earth Sciences established a National Board under the chairmanship of Director, Indian National Centre for Ocean Information Centre (INCOIS) with members drawn from Ministry of Earth Sciences (MoES), National Disaster Management Authority (NDMA), Ministry of Home Affairs (MHA), Odisha State Disaster Management Authority (OSDMA), Andaman & Nicobar Islands Directorate of Disaster Management (DDM) and INCOIS.
The Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO), established in 1960 as a body with functional autonomy within UNESCO, is the only competent organization for marine science within the UN system.

- It provides a focus with regard to ocean science, observations and data exchange, and services such as global tsunami warning systems.
- It is recognized through the United Nations Convention on the Law of the Sea (UNCLOS) as the competent international organization in the fields of Marine Scientific Research and Transfer of Marine Technology.
- Established in 1960, Headquarters at Paris, France and currently has 149 Member States.
- India is among 40 Founding Members.

Mullaperiyar Dam

- Mullaperiyar Dam is a masonry gravity dam, built at the confluence of Mullayar and Periyar rivers.
- It is located 881 m above mean sea level, on the Cardamom Hills of the Western Ghats in Thekkady, Idukki District of Kerala, South India.
- It was constructed between 1887 and 1895 by John Pennycuick and also reached an agreement to divert water eastwards to the Madras Presidency area (present-day Tamil Nadu).
- The Periyar National Park in Thekkady is located around the dam's reservoir.
- The dam is located in Kerala on the river Periyar, but is operated and maintained by the neighbouring state of Tamil Nadu as per the Periyar Lake Lease Agreement, 1886.
- On 29 October 1886, a lease indenture for 999 years was made between the Maharaja of Travancore, Visakham Thirunal Rama Varma and the British Secretary of State for India for Periyar Irrigation Works.

Mount Sinabung

- Rumbling Mount Sinabung on Indonesia's Sumatra island erupted on 10 August 2020, sending a column of volcanic materials as high as 5,000 metres (16,400 feet) into the sky.
- The volcano, one of two currently erupting in Indonesia, was dormant for four centuries before exploding in 2010, killing two people. Another eruption in 2014 killed 16 people, while seven died in a 2016 eruption.
- Sinabung is among more than 120 active volcanoes in Indonesia, which is prone to seismic upheaval due to its location on the Pacific “Ring of Fire”, an arc of volcanoes and fault lines encircling the Pacific Basin.

Ring of Fire

- The Ring of Fire (also known as the Rim of Fire or the Circum-Pacific belt) is a major area in the basin of the Pacific Ocean where many earthquakes and volcanic eruptions occur.
- In a large 40,000 km horseshoe shape, it is associated with a nearly continuous series of oceanic trenches, volcanic arcs, and volcanic belts and plate movements.
- It has 452 volcanoes (more than 75% of the world’s active and dormant volcanoes).
- About 90% of the world’s earthquakes and about 81% of the world’s largest earthquakes occur along the Ring of Fire.
- It traces boundaries between several tectonic plates—including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.

**Mahatma Gandhi Setu**

- Union Minister Of Road Transport And Highways inaugurated the rehabilitated western flank of Mahatma Gandhi Setu. It is being rehabilitated by replacing the old superstructure, except pillars, with steel deck superstructure.
- Mahatma Gandhi Setu (also called Gandhi Setu or Ganga Setu) is the ‘lifeline’ bridge of Bihar connecting north and south Bihar over river Ganga.
- Its length is 5,750 metres and it is the third-longest river bridge in India.

**Longest Bridges Above Water In India**

<table>
<thead>
<tr>
<th>Name</th>
<th>River/Water Body</th>
<th>Spanning (m)</th>
<th>Completed/Opened</th>
<th>Traffic</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhupen Hazarika Setu</td>
<td>Lohit River</td>
<td>9,150</td>
<td>2017</td>
<td>Road</td>
<td>Assam</td>
</tr>
<tr>
<td>Dibang River Bridge</td>
<td>Dibang River</td>
<td>6200</td>
<td>2018</td>
<td>Road</td>
<td>Arunachal Pradesh</td>
</tr>
<tr>
<td>Mahatma Gandhi Setu</td>
<td>Ganges</td>
<td>5750</td>
<td>1982</td>
<td>Road</td>
<td>Bihar</td>
</tr>
<tr>
<td>Bandra-Worli Sea Link</td>
<td>Mahim bay</td>
<td>5,600</td>
<td>2009</td>
<td>Road</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>Bogibeel Bridge</td>
<td>Brahmaputra River</td>
<td>4,940</td>
<td>2018</td>
<td>Rail-cum-road</td>
<td>Assam</td>
</tr>
</tbody>
</table>

**IFLOWS-Mumbai**

- Maharashtra launched an Integrated Flood Warning System called ‘IFLOWS-Mumbai’. 
A joint initiative between the Ministry of Earth Sciences (MoES) and Brihanmumbai Municipal Corporation (BMC), the warning system will be able to relay alerts of possible flood-prone areas anywhere between six to 72 hours in advance.

Mumbai is only the second city in the country after Chennai to get this system. Similar systems are being developed for Bengaluru and Kolkata.

The primary source for the system is the amount of rainfall, but with Mumbai being a coastal city, the system also factors in tidal waves and storm tides for its flood assessments.

The Future of River Management

An IDEathon on ‘The Future of River Management’ was organized by National Mission for Clean Ganga (NMCG) and the National Institute of Urban Affairs (NIUA).

It aims to explore how to shape river management strategies for the future in major crises such as Covid-19.
PM-CARES
● Recently, the Prime Minister's Office (PMO) has said in a reply that PM CARES Fund is “not a public authority” under the ambit of Section 2(h) of the RTI Act, 2005.
● Section 2(h) of the Act defines a “public authority” as “any authority or body or institution of self-government established or constituted —
  a. by or under the Constitution;
  b. by any other law made by Parliament;
  c. by any other law made by State Legislature;
  d. by notification issued or order made by the appropriate Government — and includes any
    i. body owned, controlled, or substantially financed;
    ii. non-Government Organisation substantially financed, directly or indirectly by funds provided by the appropriate Government.

For Details on PM-Cares Fund, Refer Quick Revision Part 2

Inner Line Permit System
ILP was discussed in Quick Revision - Part 1.
● The Adaptation of Laws (Amendment) Order, 2019 extended the ILP regime to Manipur – it is the fourth state after Arunachal Pradesh, Nagaland, and Mizoram where the ILP regime is applicable.
● Connection with the Citizenship Amendment Act (CAA), 2019: The CAA, which relaxes eligibility criteria for certain categories of migrants from three countries seeking Indian citizenship, exempts certain categories of areas, including those protected by the Inner Line system.

WCL Eye and SAMVAAD
● Coal India Subsidiary Western Coalfields Ltd (WCL) launched a surveillance System named WCL EYE for monitoring of its mining operations and an App named SAMVAAD to connect with its employees and stakeholders on this occasion.
● WCL EYE will monitor operations of 15 major mines of the company round the clock that account for 70% of the company's coal production. It will also help monitor coal stocks and availability of coal at sidings, keep a tab on placement of rakes and loading at railway sidings and ensure accountability.
● SAMVAAD is a Mobile and Desktop App for employees & stakeholders, which will provide a virtual platform for suggestion/feedback/experience sharing.

First Bell
● Recently, a virtual class initiative ‘First Bell’ has been started by the Kerala government.
Under the project, classes will be streamed on a free, public-run television channel available on cable networks, direct-to-home services and over the internet. Classes will be aired through the KITE VICTERS (Versatile ICT Enabled Resource for Students) channel and online platforms.

KITE (Kerala Infrastructure and Technology for Education) is a Govt of Kerala establishment set up to foster, promote and implement modernisation of educational institutions in the State of Kerala, owned by the State or run under the aid of Government.

KITE aims to upgrade the Government sector educational institutions at par with international standards in terms of infrastructure, facilities, resources, curriculum, pedagogy, etc.

National Institute of Public Finance and Policy

Urjit Patel was recently appointed chairman of the National Institute of Public Finance and Policy (NIPFP), India’s premier economic think tank.

NIPFP is an autonomous body set up jointly by the Ministry of Finance, the erstwhile Planning Commission, and several state governments.

It maintains an independent non-government character and pursues research in public policy, advising the Central government as well as states.

NIPFP’s Governing Council includes the Revenue Secretary, Economic Affairs Secretary and the Chief Economic Advisor from the Union Finance Ministry, besides representatives from Niti Aayog, RBI and three representatives of sponsoring State governments, three distinguished economists, three heads of sister research institutions, and members of other sponsoring agencies and invitees.

Anti Defection Law and Power of Speaker

The anti-defection law, referred to as the Tenth Schedule, was added to the Constitution through the 52nd (Amendment) Act, 1985 to provide for the disqualification of the members of Parliament and the state legislatures on the ground of defection from one political party to another.

Later, the 91st Amendment Act of 2003 omitted an exception provision of the Tenth Schedule i.e., disqualification on ground of defection not to apply in case of split.

Disqualification: A member of a House belonging to any political party becomes disqualified for being a member of the House,

- if he voluntarily gives up his membership of such political party; or
- if he votes or abstains from voting in such House contrary to any direction issued by his political party without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.

Exceptions: The above disqualification on the ground of defection does not apply in the following two cases:

- If a member goes out of his party as a result of a merger of the party with another party. A merger takes place when two thirds of the members of the party have agreed to such merger.
- If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it after he ceases to hold that office. This exemption has been provided in view of the dignity and impartiality of this office.

The power for this disqualification is vested in the Speaker, who is usually a nominee of the ruling party.
Originally, the act provided that the decision of the presiding officer is final and cannot be questioned in any court. However, in the Kihoto Hollohan case (1993), the Supreme Court declared this provision as unconstitutional on the ground that it seeks to take away the jurisdiction of the Supreme Court and the high courts. Hence, his decision like that of any other tribunal, is subject to judicial review on the grounds of mala fides, perversity, etc.

Recently, the Supreme Court ruled that Speakers of assemblies and the Parliament must decide disqualification pleas within a period of three months except in extraordinary circumstances. This settled the law for situations where the timing of the disqualification is meddled to manipulate floor tests.

The court also recommended that the Parliament consider taking a relook at the powers of the Speakers citing instances of partisanship. The court suggested independent tribunals to decide on disqualification.

**OBC Sub-Categorisation Commission**

The commission was constituted on 2nd October 2017 under article 340 of the Constitution to examine the issues of the sub-categorization of Other Backward Classes with the following terms of reference:

i. To examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of Other Backward Classes with reference to such classes included in the Central List;

ii. To work out the mechanism, criteria, norms, and parameters in a scientific approach for sub-categorisation within such Other Backward Classes;

iii. To take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of Other Backward Classes and classifying them into their respective sub-categories.

The four-member Commission is headed by Justice (Retd.) G. Rohini, Chief Justice (Retd.), Delhi High Court.

The commission was looking into the issues of communities that were not getting the benefits of reservation.

The Union Cabinet has recently approved a six-month extension to the commission till January 31, 2021 to submit its report as its work has been affected by the pandemic.

**Postal Ballot System**

Through this facility, a voter can cast her vote remotely by recording her preference on the ballot paper and sending it back to the election officer before counting.

Currently, only the following are allowed to vote through postal ballot system:

- Members of the armed forces like the Army, Navy and Air Force, members of the armed police force of a state (serving outside the state),
- Government employees posted outside India and their spouses
- Voters under preventive detention
- Special voters such as the President of India, Vice President, Governors, Union Cabinet ministers, Speaker of the House and government officers on poll duty have the option to vote by post. But they have to apply through a prescribed form to avail this facility.
Recently, keeping in mind the safety of senior citizens amid rising cases of the coronavirus, the Law Ministry has allowed those aged **65 years and above** to opt for postal ballot in Lok Sabha and assembly elections. It also allowed “COVID 19 suspect or affected persons” to use the postal ballot facility.

Earlier, the Law Ministry also introduced a new category of ‘**absentee voters**’, who can opt for postal voting. These are voters employed in essential services and unable to cast their vote due to their service conditions. Currently, officials of the Delhi Metro Rail Corporation, Northern Railway (Passenger and Freight) Services and media persons are notified as absentee voters.

Also in October 2019, the Law Ministry amended the Conduct of Election Rules to allow **people with disabilities and those who are 80 years of age** or above to opt for postal ballot during Lok Sabha and assembly elections.

**Committee for the Reform of Criminal Laws**
- The Ministry of Home Affairs (MHA) has constituted a national level committee under Ranbir Singh for reform in criminal law.
- The consultation exercise would go on for 3 months starting on 4 July 2020.
- The committee would be gathering opinions online, consulting with experts and collating material for their report to the government.

**Compulsory Licensing**
- Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself.
- It is one of the flexibilities in the field of patent protection included in the WTO’s agreement on intellectual property — the **TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement**. However, the TRIPS Agreement does list a number of conditions for issuing compulsory licences.
- Nationally, compulsory licensing is regulated by the **Indian Patents Act, 1970**.
- A grant of compulsory licence is made only if any of these **three conditions are satisfied**:
  - Reasonable requirement of the public with regard to the patented invention is not being satisfied.
  - That the patented invention is not available to the public at a reasonably affordable price.
  - That the patented invention is not worked in India.

**Andhra Pradesh Panchayat Raj (Second Amendment) Ordinance, 2020**
- The Ordinance was promulgated to amend the 1994 Act with respect to the appointment, qualifications, tenure and conditions of service of the **State Election Commissioner** in the State Election Commission.
- **Key Amendments**:
  - The Ordinance **changes the qualification** of the State Election Commissioner (SEC) from a person holding the office of at least Principal Secretary to the government, to that of a Judge of the High Court.
  - The Ordinance amends the **tenure** of office of the SEC from **five years to three years**.
The AP High Court has struck down the Ordinance. The Supreme Court has refused to pass any interim orders to stay the AP High court order.

State Election Commission

- Article 243-K of the Constitution vests the power of conducting elections to Panchayats (Municipalities under Article 243ZA) in the state with a State Election Commission.
- It consists of a state election commissioner to be appointed by the governor.
- His conditions of service and tenure of office shall also be determined by the governor.
- Article 243-K guarantees the security of his office. He shall not be removed from the office except in the manner and on the grounds prescribed for the removal of a judge of the state high court.

Digital Accountability and Transparency Act

- The Comptroller and Auditor General (CAG) has proposed a new law called DATA (Digital Accountability and Transparency Act) which is a three-phase transition to mandatory digital payments, accounting, and transactions for government.
- The starting point is mandatory and common data standards for all entities receiving government funds in all forms of funding. The endpoint is a single searchable website to ascertain total government funding by element and entity.
- Covering the distance between these needs three elements:
  - 100% end-to-end electronic data capture: All receipts and expenditure transactions including demands, assessment, and invoices should be received, processed, and paid electronically.
  - Data governance for standards across all government entities: Data standards are rules for describing and recording data elements with precise meanings and semantics that enable integration, sharing, and interoperability. Prescribing data elements for all transactions will ensure standardisation.
  - Technology architecture: All IT government systems should conform to a prescribed open architecture framework (for instance, IndEA) while ensuring robust security and maintaining privacy.

Election Commission’s Power to Delay Polls

- The Election Commission (EC) is mandated under law to hold elections at any time within six months before the five-year term of the Lok Sabha or Legislative Assembly expires.
- An election once called usually proceeds as per schedule. However, in some exceptional cases, the process can be postponed or even scrapped after its announcement under extraordinary circumstances.
- Under Section 153 of the Representation of the People Act, the poll panel can “extend the time” for completing an election, but such extension should not go beyond the date of the normal dissolution of the Lok Sabha or the Assembly. In 1991, the Commission, under this provision read with Article 324 of the Constitution, postponed the ongoing parliamentary elections for three weeks after Rajiv Gandhi’s assassination during his campaign in Tamil Nadu.
- Article 324 gives power to the Election Commission to direct, control, and conduct elections to all Parliament, to the Legislature of every state and of elections to the offices of the President and Vice President held under the Constitution.
Powers under Section 153 can be **exercised only after an election schedule has been notified.** If the EC wants to postpone Bihar elections, it will have to be done through its extraordinary powers under Article 324.

The Commission will have to inform the government of its inability to hold polls on time. The government and the President will then decide the future course — to impose President’s Rule or allow the incumbent Chief Minister to continue for six months.

**NATGRID and NCRB**

- The **National Intelligence Grid (NATGRID)** has signed a memorandum of understanding with the **National Crime Records Bureau (NCRB)** to access the centralised online database on FIRs and stolen vehicles.
- The MoU will give NATGRID **access to the Crime and Criminal Tracking Network and Systems (CCTNS) database**, a platform that links around 14,000 police stations. All State police are mandated to file First Information Reports (FIR) in the CCTNS.

**National Intelligence Grid (NATGRID)**

- NATGRID, an attached office of the **Ministry of Home Affairs**, has been created as an IT platform to assist the intelligence and law enforcement agencies in **ensuring national and internal security**, with the ultimate aim to counter terror.
- It was first conceptualised in 2009 and seeks to become the one-stop destination for security and intelligence agencies to access databases related to immigration entry and exit, banking, and telephone details of a suspect on a “secured platform”. The project aims to go live by December 31.
- The data will be **available for nine central agencies** including the Intelligence Bureau, Research and Analysis Wing, the Enforcement Directorate and Department of Revenue Intelligence.

**National Crime Records Bureau (NCRB)**

- NCRB, under the **Ministry of Home Affairs**, functions as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It is **headquartered in New Delhi** and was set up based on the recommendations of the National Police Commission (1977-1981) and the MHA’s Task Force (1985).

**Second Voluntary Review of SDG**

- India’s Second Voluntary National Review of **Sustainable Development Goals (SDGs)** report was presented to the **United Nations High-level Political Forum**.
- India has called upon **developed countries to provide financial assistance** to developing nations especially for global public goods such as climate change mitigation and control of pandemics, such as COVID-19, so that they can fully achieve the SDGs
- Deliberating on the “**SDG-17**” that is about “partnerships for the goals”, the report highlighted the need for international cooperation for **curbing illicit financial flows**.
- The report also identified five sectors — **education, health, electricity, roads and water and sanitation** — that will require additional funding for “significant” progress.
- The report also mentioned the “**vulnerabilities faced by the migrants and the urban poor**” in the wake of the pandemic.
The UN has set 17 Sustainable Development Goals to be achieved by 2030. Member countries are required to apprise about the progress in the form of Voluntary National Review reports. They present these reports at the High-level Political Forum, mandated to review the progress on SDGs.

United Nations High-level Political Forum

- The establishment of the United Nations High-level Political Forum on Sustainable Development (HLPF) was mandated in 2012 by the outcome document of the United Nations Conference on Sustainable Development (Rio+20).
- The HLPF is the main United Nations platform on sustainable development and it has a central role in the follow-up and review of the 2030 Agenda for Sustainable Development the Sustainable Development Goals (SDGs) at the global level.

e-SamikSha Platform

- The Prime Minister and the Cabinet Secretariat closely monitor the projects and their implementation through this platform, and follow-up actions are updated every month by the concerned ministries.
- It has been developed by the Cabinet secretariat with the technical help from National Informatics Centre (NIC).

Narcotic Drugs and Psychotropic Substances (NDPS) Act

A recent Supreme Court ruling has strengthened the ability of the police to tackle the menace of drug peddling across the country.

Background

The Supreme Court in E Micheal Raj case 2008 had ruled that since adulterated drugs contained several neutral substances which are not psychotropic in nature, it would be wrong to punish a person based on weight of seized drug.

New Ruling

- The Court held that punishment for possession of drugs will not depend on the exact quantity of drug present in a consignment. Rather, traces of an offending drug in the seized mixture will be sufficient to declare the entire quantity to be an offending drug under the Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985.
- NDPS Act is a special law and has a laudable purpose to serve and is intended to combat the menace otherwise bent upon destroying the public health and national health. The punishment part in drug trafficking is an important one but its preventive part is more important.

India’s Efforts In Fight Against The Menace Of Drugs

- Article 47 of the Indian Constitution (DPSP) directs the State to endeavour to bring about prohibition of the consumption, except for medicinal purposes, of intoxicating drugs injurious to health.
- Enactment of the Narcotic Drugs and Psychotropic Substances Act, 1985.
The Epidemic Diseases (Amendment) Ordinance, 2020

- Keeping in mind the instances of healthcare professionals being targeted and attacked during COVID-19 pandemic, the Epidemic Diseases (Amendment) Ordinance, 2020 was promulgated.
- The Ordinance specifies that no person can commit or abet an act of violence against a healthcare service personnel, or cause damage or loss to any property during an epidemic.
- Punishment: Contravention of this provision is punishable with imprisonment between 3 months and 5 years, and a fine between Rs 50,000 and 2 lakh rupees. If an act of violence causes grievous harm, imprisonment shall be between 6 months to 7 years, and a fine between 1 lakh to 5 lakh rupees.
- The Ordinance defines healthcare service personnel as a person who is at risk of contracting the epidemic disease while carrying out duties related to the epidemic. They include: (i) public and clinical healthcare providers such as doctors, (ii) any person empowered under the Act to take measures to prevent the outbreak of the disease, and (iii) other persons designated as such by the state.
- An ‘act of violence’ includes harassment or causing harm, injury, hurt, or danger to life, obstruction in discharge of duties, and loss or damage to the property or documents of the healthcare service personnel.
- Investigation: Cases registered under the Ordinance will be investigated by a police officer not below the rank of Inspector. The investigation must be completed within 30 days from the date of registration of the First Information Report.

For details on the Epidemic Diseases Act, 1897 please refer Quick Revision Part 2

Fake News in India

The Government of India issued a directive asking social media companies to voluntarily curb fake news and misinformation related to the coronavirus on their platforms. It has also launched a Chatbot on WhatsApp to address user queries and quell rumours on the coronavirus pandemic.

Legal Recourses Available For Curbing Fake News

- The Press Council of India: It can warn, admonish or censure the newspaper, the news agency, the editor or the journalist if it finds that a newspaper or a news agency has offended against the standards of journalistic ethics.
- News Broadcasters Association (NBA): Complaints can be lodged with the NBA, which represents the private television news and current affairs broadcasters. It is self-regulatory in nature and probes complaints against news broadcasters in a fair manner.
- Indian Broadcast Foundation (IBF) which was created in 1999 to look into the complaints against contents aired by 24x7 channels.
- Broadcasting Content Complaint Council (BCCC): A complaint relating to objectionable TV content or fake news can be filed to the BCCC.
- Defamation Suit: If a person finds a fake news defamatory s/he can file a civil or criminal case for defamation. IPC Section 499 makes defamation a criminal offence. Section 500 provides for punishment for criminal defamation that can extend upto a jail term of two years with or without fine.
- IPC Sections 153 and 295 can be invoked and action can be initiated against someone creating or spreading fake news if it can be termed as hate speech.
- Section 505(1)(b) of IPC—spreading false and mischievous content that results in ‘fear or alarm to the public, or to any section of the public whereby any person may be induced to commit an offence.
against the State or against the public tranquility’. Under this law, the convicted can be punished with imprisonment of a maximum of six years and a fine.

- **Section 54 of the Disaster Management Act, 2005**: Whoever makes or circulates a false alarm or warning as to disaster or its severity or magnitude, leading to panic can be punished with imprisonment which may extend to one year or with fine.

- However, there is **no specific law to deal with fake news**. Free publication or broadcast of news in India flows from the **fundamental right to freedom of expression** as enshrined under **Article 19 of the Constitution**.

**Mixed Member Proportional (MMP) System**

- Under MMP systems, the PR seats are awarded to compensate for any disproportionality produced by the district seat results.

- **For example**, if one party wins 10 percent of the vote nationally but no district seats, then it will be awarded enough seats from the PR lists to bring its representation up to 10 per cent of the seats in the legislature.

- **Voters may get two separate choices** (a party vote and an electorate vote) as in Germany and New Zealand.

- Alternatively, voters may make only one choice, with the party totals being derived from the totals for the individual district candidates.

**Mixed Member Majoritarian (MMM) Systems**:

- MMM combines **first-past-the-post voting (FPTP)** with party-list proportional representation (PR).

- In other words, MMM is described as a **mixture of two principles of electoral system design**: majoritarian systems, which usually have **single - seat districts with plurality rule** and tend to give greater representation to the two parties that receive the most votes; and proportional systems, which have **multi - seat districts, usually with party lists**, and typically produce parliamentary representation that largely mirrors the vote shares of multiple parties.

- MMM is distinct from MMP where a single election takes place, and the party vote determines what share of seats each party will receive in the legislature to "top up" its constituency seats.

**Nutrient Based Subsidy**

- The Nutrient Based Subsidy (NBS) Policy has been implemented by the **Department of Fertilizers, Ministry of Chemicals & Fertilizers** since 2010.

- Under NBS, a fixed amount of subsidy, **decided on an annual basis**, is provided on each grade of subsidized **Phosphatic & Potassic (P&K) fertilizers**, except urea, based on its Nutrient Content.

- **At present**, the government is making available fertilisers, namely **urea and 21 grades of P&K fertilisers to farmers at subsidised** prices through manufacturers/importers.

- In case of **urea**, the government **fixes** the **maximum retail price (MRP)**. The difference between the production cost and the MRP is reimbursed to manufacturers.

- Government also approved the inclusion of a **complex fertilizer, ammonium phosphate**, under the **nutrient-based subsidy scheme**.
New Features in e-NAM

- The Ministry of Agriculture & Farmers’ Welfare has launched new features of the National Agriculture Market (e-NAM) Platform to strengthen agriculture marketing by farmers.
- The new features will reduce their need to physically come to wholesale mandis for selling their harvested produce, at a time when there is a critical need to decongest mandis to effectively fight against COVID-19.

About e-NAM

- National Agriculture Market or eNAM is an online trading platform for agricultural commodities launched in 2016 as a pan-India electronic trade portal linking APMCs across the States.
- The market helps in better price discovery and provides facilities for smooth marketing of their produce.
- Already 585 mandis in 16 States and 02 Union Territories have been integrated on e-NAM portal.

National Human Rights Commission

- The National Human Rights Commission is a statutory (and not a constitutional) body. It was established in 1993 under a legislation enacted by the Parliament, namely, the Protection of Human Rights Act, 1993.
- The commission is a multi-member body consisting of a chairperson and five members. The chairperson should be a retired chief justice of India or a judge of the Supreme Court and members should be a serving or retired judge of the Supreme Court, a serving or retired chief justice of a high court and three persons (out of which at least one should be a woman) having knowledge or practical experience with respect to human rights.
- In addition to these full-time members, the commission also has seven ex-officio members— the chairpersons of the National Commission for Minorities, the National Commission for SCs, the National Commission for STs, the National Commission for Women, the National Commission for BCs and the National Commission for Protection of Child Rights and the Chief Commissioner for Persons with Disabilities.
- The chairperson and members are appointed by the President on the recommendations of a six-member committee consisting of the Prime minister as its head; Speaker of the Lok Sabha; Deputy Chairman of the Rajya Sabha; Leaders of the Opposition in both the Houses of Parliament; and Union Home Minister.
- The chairperson and members hold office for a term of three years or until they attain the age of 70 years, whichever is earlier.
- They are eligible for reappointment. After their tenure, the chairperson and members are not eligible for further employment under the Central or a state government.

Civil Services Day

- The Government of India celebrates April 21 every year as ‘Civil Services day’ as an occasion for the civil servants to rededicate themselves to the cause of citizens and renew their commitments to public service and excellence in work.
- This date is chosen to commemorate the day when the country’s first Home Minister Sardar Vallabhbhai Patel addressed the probationers of Administrative Services Officers in 1947 at Metcalf House, Delhi.
● The first function on civil services day was held in Vigyan Bhawan, New Delhi in 2006.
● As part of Civil Servant Day, Prime Minister's Awards for Excellence in Public Administration are presented to Districts/Implementing Units for implementation of Priority programme and innovation categories

E-Raktkosh Portal
● E-Raktkosh portal was launched in 2016 by the Ministry of Health and Family Welfare to standardize and streamline the standard operating procedures, guidelines and workflow of blood banks across the country.
● It is a single point for maintaining records of donors as well as providing real-time information on status of current stocks of each blood group.

Supreme Court Review on Reservation
● The Supreme Court ruled a January 2000 order of the Governor of the erstwhile state of Andhra Pradesh as unconstitutional.
  ○ The January 10, 2000 order was issued by the erstwhile State of Andhra Pradesh Bench to provide 100% reservation to the Scheduled Tribe candidates in posts of school teachers in Scheduled Areas.
● On the 2000 order, the Bench said that providing for 100% reservation is not permissible under the Constitution as the outer limit is 50% as specified in Indra Sawhney.
● The court observed that a reservation that is permissible by protective mode, by making it 100% would become discriminatory and impermissible.
● By providing 100% reservation to the Scheduled Tribes, it has deprived the Scheduled Castes and Other Backward Classes also of their due representation.
● The action is thus unreasonable and arbitrary and violative of provisions of Articles 14, 15 and 16 of the Constitution of India.
● It also impinges upon the right of open category and Scheduled Tribes who have settled in the area after 26th January 1950.
● The Bench also said that the lists of those entitled to reservation must be revised from time to time.

Press Council of India
● The objective is to preserve the freedom of the press and of maintaining and improving the standards of press in India.
● It is a statutory, quasi judicial authority functioning as a watchdog of the press, for the press and by the press.
● It adjudicates the complaints against and by the press for violation of ethics and for violation of the freedom of the press respectively.
● The Press Council is headed by a Chairman, who has by convention, been a retired judge of the Supreme Court of India.
● Composition: The Council consists of 28 other members of whom:
○ 20 represent the press and are nominated by the press organisations/news agencies recognised and notified by the Council as all India
○ 5 members are nominated from the two Houses of Parliament
○ 3 represent cultural, literary and legal fields as nominees of the Sahitya Academy, University Grants Commission and the Bar Council of India.

● The members serve on the Council for a **term of three years.**
● A retiring member shall be **eligible for renomination for not more than one term.**

**National Panchayati Raj Day**

- The **Constitution (73rd Amendment) Act, 1992** that came into force with effect from 24th April, 1993 has vested constitutional status on Panchayati Raj institutions. Accordingly, the Government of India decided in consultation with the States to celebrate 24th April as National Panchayati Raj Day since 2010.

- On the occasion of Panchayati Raj Day 2020, **two programmes were launched:**
  1. **E-Gram Swaraj Portal:** To monitor rural infrastructure works and e-governance.

- The eGram Swaraj portal/app will provide panchayats a **single interface to prepare and implement their gram panchayat development plan (GPDP).** It will also provide records of work from planning to the implementation in every village panchayat GPDP.

- **Features:**
  - Monitoring and recording all the work via Gram Swaraj Portal/App.
  - Contain the details of ongoing development works and the fund allocated for the projects.
  - The works of the Ministry of Panchayati Raj will be accessible through Gram Swaraj Portal.

- **Benefits:**
  - The E-Gram Swaraj Portal will mark the complete digitization of the villages to **strengthen e-governance in Panchayati Raj institutions** in the whole country.
  - It will provide a **boost in transparency by decentralized planning** of development projects, with progress reports updates and increased accountability.

  2. **Swamitva programme:** To streamlining **planning and revenue collection** in rural areas and ensuring clarity on property rights and creation of **better-quality Gram Panchayat Development Plans** engaging Drone Surveying technology.

- The program is currently being **implemented in six states** - Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand.

- It will help in establishing a strong financial system by integrating the **Priya Soft and PFMS,** the payment portals of the Ministry of Panchayati Raj.

- **E-Gram Swaraj Portal:**

**National Legal Services Authority (NALSA)**

- The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987.

- **Aim:** To provide **free Legal Services to the weaker sections** of the society and to **organize Lok Adalats** for amicable settlement of disputes.
● It will ensure that opportunities for securing justice are not denied to any citizen by reasons of economic or other disabilities.

● The **Chief Justice of India shall be the Patron-in-Chief** and the **second senior-most judge of the Supreme Court of India is the Executive-Chairman**.

● ‘Nyaya Deep’ is the official newsletter of NALSA.

● In every State, the State Legal Services Authority has been constituted to give effect to the policies and directions of the NALSA and to give free legal services to the people and conduct Lok Adalats in the State.

● The State Legal Services Authority is **headed by Hon’ble the Chief Justice of the respective High Court** who is the Patron-in-Chief of the State Legal Services Authority.

● In every District, the District Legal Services Authority has been constituted to implement Legal Services Programmes in the District.

● The District Legal Services Authority is situated in the District Courts Complex in every District and **chaired by the District Judge of the respective district.**

**Central Vigilance Commission**

● The Central Vigilance Commission (CVC) is the main agency for preventing corruption in the Central government. It was **established in 1964 by an executive resolution** of the Central government.

● Its establishment was **recommended by the Santhanam Committee** on Prevention of Corruption (1962–64).

● Originally, the CVC was neither a constitutional body nor a statutory body. Later, in 2003, the **Parliament enacted a law conferring statutory status on the CVC**.

● Composition: Multi-member body consisting of a **Central Vigilance Commissioner (chairperson)** and **not more than two vigilance commissioners**.

● **Appointment:** Appointed by the **President** by warrant under his hand and seal on the recommendation of a three member committee consisting of the Prime minister as its head, Union Minister of Home Affairs, and Leader of the Opposition in the Lok Sabha.

● **Term:** Term of 4 years or until they attain the age of 65 years, whichever is earlier.

● After their tenure, they are **not eligible for further employment** under the Central or a state government.

● Recently, **Sanjay Kothari was appointed as Central Vigilance Commissioner by the President.**

**Chakmas and Hajongs**

● A Delhi-based rights body has sought Prime Minister’s intervention in **ensuring food for the Chakma and Hajong communities in Arunachal Pradesh** who have allegedly not been included in the government’s economic package.

● The **Chakmas and Hajongs do not have ration cards** as the State government had seized those through an order on October 25, 1991. As a result, the two communities have been forced to buy rice at ₹29 per kg while other vulnerable sections have been paying ₹5 per kg as per the economic package announced by the State government.

● **Denial of food was a violation of the right to life guaranteed under Article 21** of the Constitution
The Chakmas and Hajongs are ethnic people who lived in the Chittagong Hill Tracts, most of which are located in Bangladesh. Chakmas are predominantly Buddhists, while Hajongs are Hindus. They are found in northeast India, West Bengal, Bangladesh, and Myanmar.

The Chakmas and Hajongs living in India are Indian citizens. Some of them, mostly from Mizoram, live in relief camps in southern Tripura due to tribal conflict with Mizos.

The Chakmas and Hajongs living in the Chittagong Hill Tracts fled erstwhile East Pakistan in 1964-65, since they lost their land to the development of the Kaptai Dam on the Karnaphuli River. In addition, they also faced religious persecution as they were non-Muslims and did not speak Bengali. They eventually sought asylum in India.

Constitutional Provisions regarding Minority Educational Institutions

- **Article 30(1)** recognizes linguistic and religious minorities but not those based on race, ethnicity.
  - It recognizes the right of religious and linguistic minorities to establish and administer educational institutions, in effect recognizing the role educational institutions play in preserving distinct culture.
  - A majority community can also establish and administer educational institutions but they will not enjoy special rights under Article 30(1) (a).

- Recently, the Supreme Court held that the National Eligibility-cum-Entrance Test (NEET) is mandatory for admission to medical colleges run by religious and linguistic minority communities. NEET would apply for both aided and unaided medical colleges administered by minorities.

- It does not violate any fundamental and religious rights of minorities. The court held that the **right to freedom of trade or business is not absolute.** It is subject to reasonable restriction in the interest of the students’ community to promote merit, recognition of excellence, and to curb the malpractices. A uniform entrance test qualifies the test of proportionality and is reasonable.

Jammu & Kashmir and Electoral College

- Under **Article 54**, the President is elected by an Electoral College, which consists of the elected members of both Houses of Parliament and the elected members of the Legislative Assemblies of all the States and also of NCT of Delhi and the Union Territory of Puducherry.

- Article 54, thus, only specifically mentions NCT of Delhi and Puducherry as eligible to be part of the Electoral College. There is no word about the newly-formed UTs of J&K and Ladakh.

- The J&K Reorganisation Act, which came into existence from August 2019, does not specify anything about whether the legislature of J&K would be able to vote in the election for a President. A passing mention is made in Section 13 of the 2019 Act, which claims that J&K Legislature would have the same powers as its Puducherry counterpart.

- **Inclusion of new members in the Electoral College** in Article 54 would require a Constitutional Amendment to be carried out through two-thirds majority in Parliament and ratification by over 50% of the States.

- Delhi and Puducherry were included as Electoral College members under Article 54 through the **Constitution (Seventieth) Amendment Act of 1992.** Before that, Article 54 consisted of only the elected Members of Parliament as well as the Legislative Assemblies of the States.
Ayushman Bharat Yojana

- Ayushman Bharat, a flagship scheme of Government of India, was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC).
- This initiative has been designed to meet Sustainable Development Goals (SDGs) and its underlying commitment to "leave no one behind."
- This scheme aims to undertake path breaking interventions to holistically address the healthcare system (covering prevention, promotion and ambulatory care) at the primary, secondary and tertiary level.
- Ayushman Bharat adopts a continuum of care approach, comprising of two interrelated components, which are -
  a) Health and Wellness Centres (HWCs)
  b) Pradhan Mantri Jan Arogya Yojana (PM-JAY)
- Features:
  - Coverage of Rs.5 lakh per family per annum for secondary and tertiary care across public and private hospitals.
  - Approximately 50 crore beneficiaries (over 10 crore poor and vulnerable entitled families) are eligible for the scheme.
  - Cashless hospitalisation.
  - Includes costs for diagnostic services, drugs, room charges, physician’s fees, surgeon charges, supplies, ICU and OT charges.
  - Public hospitals are reimbursed for the healthcare services at par with the private hospitals.
  - No restriction on the family size, gender or age.

Vande Bharat Mission

- The government launched the Vande Bharat Mission in April to repatriate Indians who had been stranded around the globe because of Covid-19-related restrictions. It is one of the largest evacuation exercises since the 1990 Kuwait airlift.
- The mission envisages a repatriation plan where the government will be facilitating the return of Indian nationals stranded abroad on compelling grounds in a phased manner.
- Priority will be given to migrant workers, labourers who have been laid off and those faced with expiry of short term visas, persons with medical emergencies, pregnant women and elderly, those required to return to India due to death of family members and students.
- The government said only those who test Covid-19 negative would be allowed to travel.

Abolition of Posts in MES

- The Defence Minister has approved a proposal for the abolition of 9,304 posts in the Military Engineering Service (MES).
- It was aimed at making the MES an effective organisation with a leaner workforce, well equipped to handle complex issues in the emerging scenario in an efficient and cost-effective manner.
- This is in line with the recommendations of the Lt. Gen. D.B. Shekatkar (Retd.) Committee, which had suggested measures to enhance combat capability and rebalance armed forces’ expenditure.
One of the recommendations was to restructure the civilian workforce in a manner that the work of the MES could be partly done by departmentally employed staff and other works could be outsourced.

Atal Pension Yojana

- The Government of India launched the Atal Pension Yojana (APY) in May, 2015 with an objective of delivering old age income security particularly to the workers in the unorganised sector.
- APY can be subscribed by any Indian citizen in the age group of 18-40 years having a bank account. It is open to all bank account holders who are not members of any statutory social security scheme.
- It provides a minimum guaranteed pension ranging from Rs 1000 to Rs 5000 on attaining 60 years of age.
- The amount of pension is guaranteed for lifetime to the spouse on death of the subscriber. In the event of death of both the subscriber and the spouse, the entire pension corpus is paid to the nominee.
- Contributions to the APY are eligible for tax benefits similar to the National Pension System (NPS).
- It is administered by the Pension Fund Regulatory and Development Authority (PFRDA).
- PFRDA is the statutory Authority established by an enactment of the Parliament, to regulate, promote and ensure orderly growth of the National Pension System (NPS) and pension schemes to which this Act applies.

Common Service Centres Scheme

- Common Service Centres (CSC) scheme, approved in May 2006, forms a strategic component of the National eGovernance Plan. It is one of the mission mode projects under the Digital India Programme.
- CSCs are the access points for delivery of essential public utility services, social welfare schemes, healthcare, financial, education and agriculture services, apart from host of B2C services to citizens in rural and remote areas of the country.
- Based on the assessment of the CSC scheme, the Government launched the CSC 2.0 scheme in 2015 to expand the outreach of CSCs to all Gram Panchayats across the country with following features:
  a) A self-sustaining network of 2.5 lakh CSCs in Gram Panchayats
  b) Large bouquet of e-services through a single delivery platform
  c) Standardization of services and capacity building of stakeholders
  d) Localised Help Desk support
  e) Sustainability of Village Level Entrepreneurs (VLEs) through maximum commission sharing
  f) Encouraging more women as VLEs

One Nation One Ration Card Scheme

- The national rollout of ‘One Nation, One Ration Card’ system was recently announced by the Finance Minister in all states and Union Territories by March 2021.
- The new system, based on a technological solution, will identify a beneficiary through biometric authentication on electronic Point of Sale (ePoS) devices installed at the Fair Price Shops (FPSs),
and enable that person to purchase the quantity of foodgrains to which she is entitled under the National Food Security Act (NFSA).

- Under the NFSA, 2013, about 81 crore persons are entitled to buy subsidized foodgrain — rice at Rs 3/kg, wheat at Rs 2/kg, and coarse grains at Re 1/kg — from their designated Fair Price Shops (FPS) of the Targeted Public Distribution System (TPDS).

  - This system will enable migrant workers and their family members to access PDS benefits from any Fair Price Shop in the country.
  - Ration card portability is aimed at providing intra-state as well as inter-state portability of ration cards.
  - The Integrated Management of Public Distribution System (IM-PDS) portal provides the technological platform for the inter-state portability of ration cards, enabling a migrant worker to buy food grains from any FPS across the country.
  - The Annavittan portal hosts the data of distribution of food grains through E-PoS devices within a state. The portal enables a migrant worker or his family to avail the benefits of PDS outside their district but within their state.
  - As of now, 24 States/UTs are connected under the ONORC scheme. The remaining states/UTs are targeted to be integrated in national portability by March 2021.

**Darbar Move**

- Darbar Move is a century-old practice in which the government functions for six months each in the two capitals of the State, Srinagar and Jammu.
- The practice of 'Darbar Move' was started by Maharaja Ranbir Singh in 1872 to escape the extreme weather conditions in the two regions. When the capital shifts, so does the civil secretariat, important subsidiary offices, files and government documents, and the assembly.
- This 148-year-old Jammu and Kashmir (J&K) tradition has been postponed for the first time in its history.

**Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979**

- The Act seeks to regulate the employment of inter-State migrants and their conditions of service.
- It is applicable to every establishment that employs five or more migrant workmen from other States; or if it had employed five or more such workmen on any day in the preceding 12 months. It is also applicable to contractors who employed a similar number of inter-State workmen.
- It envisages a system of registration wherein, the principal employer is prohibited from employing inter-State workmen without a certificate of registration from the relevant authority.
- As part of the licensing process, contractors are bound by certain conditions of the agreement or any other arrangement on the basis of which they recruit workers. In no case, shall the wages be lower than what is prescribed under the Minimum Wages Act.
- Occupational Safety, Health and Working Conditions Code, 2019 has been introduced in Parliament to merge 13 labour laws into a single piece of legislation including Inter-State Migrant Workmen Act, 1979.
Domicile Certificates in Jammu & Kashmir

- The J&K administration notified the J&K grant of domicile certificate procedure rules 2020.
- It sets a fast track process in motion to issue the certificates within a stipulated time of 15 days.
- Domicile certificates have now been made a basic eligibility condition for appointment to any post under the Union Territory of J&K.
- To make the process transparent and time-bound, any officer not able to issue the certificate would be penalised ₹50,000.
- Eligibility:
  - Under the amended rules, eligible non-locals can also apply for the certificate.
  - All Permanent Resident Certificate holders and their children living outside J&K can apply for the certificates.
  - Central government officials, All India Service Officers, officials of Public Sector Undertakings, Autonomous bodies of the Central Government, Public Sector Banks, Statutory bodies, Central Universities and recognised research institutes of the Central Government, who have served in the Union Territory of Jammu and Kashmir for a total period of ten years, are eligible for the certificate.

Star Rating of Garbage Free Cities

- The Ministry of Housing and Urban Affairs (MOHUA) has launched the Protocol for Star Rating of Garbage Free cities.
- The star rating conditions have been designed in a way as to enable cities to gradually evolve into a model (7-star) city, with progressive improvements in their overall cleanliness.
- The star rating conditions are based on 25 key parameters across the solid waste management spectrum and have been designed to both help cities assess their progress while encouraging them to move towards a better rating thereby improving their cities' overall cleanliness and aesthetics.
- The Star Rating is supported by a robust verification mechanism to ensure transparency and standardisation. Cities are required to carry out self-assessment and self-verification for achieving a certain star rating. This self-declaration will be further verified through an independent third-party agency appointed by MoHUA.

Pradhan Mantri Vaya Vandana Yojana

- Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a pension scheme launched in 2017 by the Finance Ministry exclusively for the senior citizens aged 60 years.
- This is a scheme offered by the Life insurance Corporation (LIC) of India that gives a guaranteed payout of pension at a specified rate for 10 years. It also offers a death benefit in the form of return of purchase price to the nominee.
- Senior citizens can draw a minimum pension of ₹1,000 per month depending on the amount invested in the scheme. The maximum pension amount is limited at ₹10,000 per month.
- One can invest a maximum amount of ₹15 lakh under PMVVY scheme.
- Loan upto 75% of Purchase Price shall be allowed after 3 policy years
- The scheme is exempted from GST and aadhar has been made mandatory to avail the benefit of the scheme.
- Minimum age to apply for PMVVY is 60 age and there is no upper age limit on entry.
● **New Rules:**
  ○ PMVVY pension scheme has now been extended till March 31, 2023. This scheme was open till March 31, 2020.
  ○ Initially an assured rate of return of 7.40% per annum for the year 2020-21 per annum has been allowed and thereafter it is to be reset every year.
  ○ Annual reset of assured rate of interest with effect from April 1st of financial year in line with revised rate of returns of Senior Citizens Saving Scheme (SCSS) upto a ceiling of 7.75% with fresh appraisal of the scheme on breach of this threshold at any point.
  ○ Delegating the authority to Finance Minister to approve annual reset rate of return at the beginning of every financial year

**Criminal Defamation Law**

● In a landmark ruling, the Madras High Court held that public servants and constitutional functionaries cannot be allowed to misuse the law of criminal defamation by using the State as a tool to initiate defamation proceedings against adversaries.
  
  ● The court quashed criminal defamation proceedings launched by the State government against a host of media houses and journalists during Jayalalithaa’s tenure as Chief Minister in 2012 and 2013.
  
  ● **Section 499 of the IPC,1860 defines defamation as being committed:**
    a) Through: (i) words (spoken or intended to be read), (ii) signs, or (iii) visible representations;
    b) Which: are published or spoken imputation concerning any person;
    c) If the imputation is spoken or published with: (i) the intention of causing harm to the reputation of the person to whom it pertains, or (ii) knowledge or reason to believe that the imputation will harm the reputation of the person to whom it pertains will be harmed.
  
  ● There are two types of defamation in India: Civil and Criminal.
    a) In civil defamation a person who is defamed can move either High Court or subordinate courts and seek damages in the form of monetary compensation. There is no punishment in the form of jail sentences.
    b) In criminal defamation, the person against whom a defamation case is filed might be sentenced to two years’ imprisonment or fined or both.

**Sedition Law**

● Sedition, which falls under **Section 124A of the Indian Penal Code (IPC)**, is defined as any action that brings or attempts to bring hatred or contempt towards the Government of India.
  
  ● Sedition is a non-bailable offence. Punishment under the law varies from imprisonment up to three years to a life term and fine. A person charged under this law can’t apply for a government job. They have to live without their passport and must present themselves in the court as and when required.
  
  ● Sedition was drafted by Thomas Babington Macaulay and included in the IPC in 1870. The provision covers almost any form of expression: words, “either spoken or written”, signs, as well as “visible representation”.

*Quick Revision For Prelims 2020 - Current Affairs (16th April To 15th August 2020)*
In 1898, the provision was made even more stringent and was amended to include “contempt”, “hatred”, and “disloyalty” within the ambit of “disaffection”, as the colonial authorities were finding it difficult to secure convictions on the basis of proving “disaffection” alone.

Grants-in-aid for Rural Local Bodies

The Ministry of Finance has released an amount of Rs.15187.50 crore as grants-in-aid, in respect of 2.63 lakh Rural Local Bodies (RLBs) spread in 28 States of the country.

This grants-in-aid forms part of the Tied Grant as recommended by Fifteenth Finance Commission (XV-FC) for the period FY 2020-21.

The Fifteenth Finance Commission (XV FC) submitted its interim report for the period FY 2020-21 and the Government of India accepted its recommendations in respect of the Local Bodies.

The Commission has recommended the total size of the grant to be Rs.60,750 crore for the period FY 2020-21 for the Rural Local Bodies (RLBs). This is the highest ever allocation made by the Finance Commission in any single year.

The Commission has recommended Grants-in-aid to all tiers of the Panchayati Raj including the Traditional Bodies of Fifth and Sixth Schedule areas, in 28 States, in two parts (50% of the grant in each), namely, (i) a Basic Grant and (ii) a Tied Grant.

i) The Basic Grants are untied and can be used by RLBs for location-specific felt needs, except for salary or other establishment expenditure.

ii) The Tied Grants are to be used for the basic services of

- sanitation and maintenance of open-defecation free (ODF) status and
- supply of drinking water, rain water harvesting and water recycling
- The RLBs shall, as far as possible, earmark one half of these Tied Grants each to these two critical services.
- However, if any RLB has fully saturated the needs of one category it can utilize the funds for the other category.

Finance Commissions

Article 280 of the Constitution of India provides for a Finance Commission as a constitutional and a quasi-judicial body. It is constituted by the President of India every fifth year or at such earlier time as he considers necessary.

The Finance Commission consists of a chairman and four other members to be appointed by the President. They hold office for such a period as specified by the President in his order. They are eligible for reappointment.

The chairman should be a person having experience in public affairs and the four other members should be selected from amongst the following:

i) A judge of high court or one qualified to be appointed as one.
ii) A person who has specialised knowledge of finance and accounts of the government.
iii) A person who has wide experience in financial matters and in administration.
iv) A person who has special knowledge of economics

The commission submits its report to the President who lays it before both the Houses of Parliament along with an explanatory memorandum as to the action taken on its recommendations.
Recommendations made by the Finance Commission are only of advisory nature and hence, not binding on the government.

**Consumer Protection Act, 2019 (Update)**

*Consumer Protection Bill, 2019 was discussed in Quick Revision Part 1.*

- The Consumer Protection Act, 2019 came into force on **20th July 2020**.
- The Act includes establishment of the Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of consumers.
  - E-commerce platforms also have to acknowledge the receipt of any consumer complaint within 48 hours and redress the complaint within one month from the date of receipt under this Act.
  - The **Consumer Protection (E-commerce) Rules, 2020** are mandatory and are not advisories.
- It provides for **simplifying the consumer dispute adjudication process** in the consumer commissions. It includes empowerment of the State and District Commissions to review their own orders, enabling a consumer to file complaints electronically and file complaints in consumer Commissions that have jurisdiction over the place of his residence, videoconferencing for hearing and deemed admissibility of complaints if the question of admissibility is not decided within the specified period of 21 days.
- It also provides for **Alternate Dispute Resolution mechanism of Mediation** for simplifying the adjudication process. A complaint will be referred by a Consumer Commission for mediation, wherever scope for early settlement exists and parties agree for it. There will be **no appeal against settlement through mediation**.
- The new act also **introduces the concept of product liability** and brings within its scope, the product manufacturer, product service provider and product seller, for any claim for compensation.

**National Financial Reporting Authority**

- The National Financial Reporting Authority (NFRA) has constituted a **Technical Advisory Committee (TAC)** under the Chairmanship of R Narayanaswamy.
- It comprises **seven members, including the Chairman**.
- The TAC would aid and advise the Executive Body of the NFRA on issues related to the drafts of **accounting standards and auditing standards**. It will also provide inputs from the perspectives of users, preparers and auditors of financial statements.
- NFRA was constituted in **October, 2018** by the Government of India under section 132 of the **Companies Act, 2013**.
- **Functions and Duties:**
  - Recommend **accounting and auditing policies and standards** to be adopted by companies for approval by the Central Government;
  - **Monitor and enforce compliance** with accounting standards and auditing standards;
  - Oversee the quality of service of the professions associated with ensuring compliance with such standards and suggest measures for improvement in the quality of service;
  - Perform such other functions and duties as may be necessary or incidental to the aforesaid functions and duties.
- The Companies Act requires the NFRA to have a **chairperson** who will be appointed by the Central Government and a **maximum of 15 members**.
Powers:

- It is empowered to oversee the quality of audit service and undertake investigation of companies whose securities are listed on any stock exchange in India or abroad.
- It can probe unlisted public companies having paid-up capital of no less than Rs 500 crore or annual turnover of no less than Rs 1,000 crore.
- It has also been given powers to investigate professional misconduct committed by members of the Institute of Chartered Accountants of India (ICAI) for prescribed classes of body corporate or persons.

Plea Bargaining

- Plea bargaining refers to a person charged with a criminal offence negotiating with the prosecution for a lesser punishment than what is provided in law by pleading guilty to a less serious offence.
- It primarily involves pretrial negotiations between the accused and the prosecutor. It may involve bargaining on the charge or in the quantum of sentence.
- The Law Commission of India, in its 142nd Report, mooted the idea of “concessional treatment” of those who plead guilty on their own volition, but was careful to underscore that it would not involve any plea bargaining or “haggling” with the prosecution.
- Plea bargaining was introduced in 2006 as part of a set of amendments to the Code of Criminal Procedure (CrPC). There has always been a provision in the Code of Criminal Procedure for an accused to plead ‘guilty’ instead of claiming the right to a full trial, but it is not the same as plea bargaining.
- The Indian code makes plea bargaining a process that can be initiated only by the accused; further, the accused will have to apply to the court for invoking the benefit of bargaining.
- Cases for which the practice is allowed are limited.
  - Only someone who has been charge sheeted for an offence that does not attract the death sentence, life sentence or a prison term above seven years can make use of the scheme.
  - It is also applicable to private complaints of which a criminal court has taken cognisance. Other categories of cases that cannot be disposed of through plea bargaining are those that involve offences affecting the “socio-economic conditions” of the country, or committed against a woman or a child below the age of 14.
- The Justice Malimath Committee on reforms of the criminal justice system endorsed the various recommendations of the Law Commission with regard to plea bargaining.
- Advantages: The practice would ensure speedy trial, end uncertainty over the outcome of criminal cases, save litigation costs and relieve the parties of anxiety. It would also have a dramatic impact on conviction rates and reduce overcrowding of prisons.

Contempt of Court

- According to the Contempt of Courts Act, 1971, contempt of court can either be civil contempt or criminal contempt.
- Civil contempt means wilful disobedience to any judgment, decree, direction, order, writ or other process of a court or wilful breach of an undertaking given to a court.
Criminal contempt means the publication (whether by words, spoken or written, or by signs, or by visible representations, or otherwise) of any matter or the doing of any other act whatsoever which
i) scandalises or tends to scandalise, or lowers or tends to lower the authority of, any court; or
ii) prejudices, or interferes or tends to interfere with, the due course of any judicial proceeding; or
iii) interferes or tends to interfere with, or obstructs or tends to obstruct, the administration of justice in any other manner.

A contempt of court may be punished with simple imprisonment for a term which may extend to six months, or with fine which may extend to two thousand rupees, or with both, provided that the accused may be discharged or the punishment awarded may be remitted on apology being made to the satisfaction of the court.

Constitutional Provisions related to contempt and freedom of speech and expression:

- Article 19(1)(a) of the Constitution gives the right to freedom of speech and expression to all citizens, while “contempt provisions” curb people’s freedom to speak against the court’s functioning.
- Article 129 and 215 of the Constitution of India empowers the Supreme Court and High Court respectively to punish people for their respective contempt.
- Article 142(2) enables the Supreme Court to investigate and punish any person for its contempt.
- Power to punish for contempt of court under Articles 129 and 215 is not subject to Article 19(1)(a).

Merger Under 10th Schedule

- The Tenth Schedule of the Constitution prohibits defection to protect the stability of governments but does not prohibit mergers.
- Paragraph 4(2) of the Tenth Schedule, dealing with mergers, says that only when two-thirds of the members agree to “merge” the party would they be exempt from disqualification.
- However, the Tenth Schedule identifies the dichotomy between state units and national units. As per Paragraph 4(2), “merger” of a party means merger of a legislative party of that House.
- “Legislature Party” for this purpose means the group consisting of all the members of that House for the time being belonging to that political party in accordance with the said provisions.
- Additionally, the whip has to necessarily be issued for voting on the floor of the House. Every legislative party identifies the party’s whip at the beginning of the Assembly’s term and conveys this to the Speaker. A national leader’s direction cannot be considered a whip in the context of the anti-defection law.

AuditOnline Application

- The Ministry of Panchayati Raj has decided to conduct an online audit of 20% (around 50,000 panchayats) of the estimated 2.5 lakh gram panchayats (GPs) across the country for the current financial year. Their books of accounts will be audited with a focus on how they used Finance Commission (FC) grants.
- This is the first such exercise and is to be conducted through the AuditOnline application, developed by the Ministry to ensure accountability in the utilisation of funds at the ground level.
- AuditOnline is an open-source application developed as part of Panchayat Enterprise Suite (PES) under e-panchayat Mission Mode Project (MMP) initiated by the Ministry of Panchayati Raj.
The audit will be scaled up to cover all Panchayats across the country in the next financial year 2020-21.

Online audit will ease access to records, and can be monitored at district, state and Centre level. Uploading photos of work done and geo-tagging projects will also allow for physical inspection.

In the new process, the auditors will be able to see online all documents related to work approval and payments.

Committee on Content Regulation in Government Advertising (CCRGA)

As per the directions of the Supreme Court in 2015, the Government of India had set up a committee on content regulation in government advertising (CCRGA) in 2016 to look into content regulation of government funded advertisements in all media platforms.

It is a three-member Body empowered to address complaints from the general public on violation of the Supreme Court guidelines and make suitable recommendations.

The Committee can also take suo-moto cognizance of any violation/ deviation of the Supreme Court guidelines and recommend corrective actions.

Supreme Court Guidelines

The content of the government advertisements should be relevant to constitutional and legal obligations as well as the citizens’ rights and entitlements.

The advertisement materials should be presented in an objective, fair and presentable manner and are designed to meet the objectives of the campaign to ensure maximum reach in a cost-effective way.

It should not promote the political interests of the ruling party, which may include avoiding glorification of political personalities and maintaining political neutrality, attacking opposition and displaying party political logos.

Governor’s Power to Summon the House

Article 174 of the Constitution gives the Governor the power to summon from time to time “the House or each House of the Legislature of the State to meet at such time and place as he thinks fit…”

However, the phrase “as he thinks fit” is read as per Article 163 of the Constitution which says that the Governor acts on the aid and advice of the cabinet.

In the 2016 Uttarakhand case, the Supreme Court has clarified that when the majority of the ruling party is in question, a floor test must be conducted at the earliest available opportunity.

In 2016, a Constitution Bench of the Supreme Court in Nabam Rebia and Bamang Felix vs Deputy Speaker, the Arunachal Pradesh Assembly case, expressly said that the Governor can summon, prorogue and dissolve the House, only on the aid and advice of the Council of Ministers with the Chief Minister as the head and not on his own.

Governor’s Discretionary Powers

Article 163(1) of the Constitution says that “there shall be a council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this constitution required to exercise his functions or any of them in his discretion.”
● Article 163(1) essentially limits any discretionary power of the Governor only to cases where the Constitution expressly specifies that the Governor must act on his own and apply an independent mind.

● When the chief minister has lost the support of the House and his strength is debatable, then the Governor need not wait for the advice of the council of ministers to hold a floor test.

AIM-iCREST

● Atal Innovation Mission (AIM) has launched AIM iCREST – an Incubator Capabilities enhancement program for a Robust Ecosystem focused on creating high performing Startups. This is a first of its kind initiative for advancing innovation at scale in India.

● It aims to encourage and enable holistic progress in the incubator ecosystem across the country.

● For this initiative, AIM has joined hands with Bill & Melinda Gates Foundation and Wadhwani Foundation - organizations that can lend credible support and expertise in the entrepreneurship and innovation space.

● AIM iCREST has been designed to enable the incubation ecosystem and act as a growth hack for AIM’s Atal and Established incubators across the country.

● Under the initiative, the AIM’s incubators are set to be upscaled and provided requisite support to foster the incubation enterprise economy, that will help them to significantly enhance their performance. This will be complemented by providing training to entrepreneurs, through technology driven processes and platforms.

Atal Innovation Mission

● The Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship across the length and breadth of the country.

● Goals of AIM:
  ○ Establishment and promotion of Small Business Innovation Research and Development at a national scale (AIM SBIR) for the SME/MSME/startups.
  ○ Rejuvenating Science and Technology innovations in major research institutions of the country like CSIR, ICAR, ICMR aligned to national socio-economic needs.

● Initiatives under AIM:
  ○ Atal Tinkering Labs- Creating problem solving mindset across schools in India.
  ○ Atal Incubation Centers- Fostering world class startups and adding a new dimension to the incubator model.
  ○ Atal New India Challenges- Fostering product innovations and aligning them to the needs of various sectors/ministries.
  ○ Mentor India Campaign- A national Mentor network in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.
  ○ Atal Community Innovation Center- To stimulate community centric innovation and ideas in the unserved /underserved regions of the country including Tier 2 and Tier 3 cities.
  ○ Atal Research and Innovation for Small Enterprises (ARISE)- To stimulate innovation and research in the MSME industry.
E-Commerce Sites Must State Country of Origin

- The Centre told the Delhi High Court that all e-commerce entities, including Amazon, Flipkart, and Snapdeal, have to ensure the mandatory declaration of country of origin of imported products sold on their site.
- The laws relating to the issue were enacted under the Legal Metrology Act, 2009 and the Legal Metrology (Packaged Commodities) Rules, 2011.
- Enforcement of the provisions of the Act and Rules rested with the States and UTs governments.
- Whenever violations are observed, action is taken by the legal metrology officials of the States/ UTs governments in accordance with the law.
- The Consumer Protection Act 2019 also mandates to display the ‘country of origin’ by the e-commerce entities.

Habeas Corpus

- Jammu & Kashmir High Court was confronted with an unprecedented situation — a staggering 250-plus habeas corpus petitions challenging detentions under the Public Safety Act post abrogation of the special status of the erstwhile state on August 5, 2019.
- The writ of habeas corpus literally means ‘to have the body of’. It is an order issued by the court to a person who has detained another person, to produce the body of the latter before it.
- The court then examines the cause and legality of detention. It would set the detained person free, if the detention is found to be illegal. Thus, this writ is a bulwark of individual liberty against arbitrary detention.
- The writ of habeas corpus can be issued against both public authorities as well as private individuals. The writ, on the other hand, is not issued where the
  a. detention is lawful
  b. proceeding is for contempt of a legislature or a court
  c. detention is by a competent court
  d. detention is outside the jurisdiction of the court.

Jammu & Kashmir Public Safety Act

- The law was introduced by Sheikh Abdullah in 1978 to prevent timber smuggling, and keep the smugglers in prison. This is a preventive detention law that allows the State government to detain a person up to two years without a trial.
- In police custody, a person has to be produced before a magistrate within 24 hours of detention. But the PSA allows the State to hold a person without producing them in court.
- Within four weeks of passing the detention order, the government has to refer the case to an Advisory Board. If the Board thinks that there is cause for preventive detention, the government can hold the person up to two years.
- According to Section 13(2), the detaining authority need not even inform the detained individual as to the reason for the action, if it decides that it goes against public interest.
- The only way to challenge preventive detention order is through a habeas corpus petition filed by relatives of the detained person.
- Both the High Court and the Supreme Court have jurisdiction to hear such petitions and pass a final order seeking quashing of the PSA.
Negative Import List for Defence

- The Ministry of Defence has prepared a list of 101 items for which there would be an embargo on the import beyond the timeline indicated against them. This is a big step towards self-reliance in defence.
- It essentially means that the Armed Forces—Army, Navy and Air Force—will only procure all of these 101 items from domestic manufacturers. The manufacturers could be private sector players or defence Public Sector Undertakings (DPSUs).
- Government has also decided that in any government contract over ₹200 crore, no foreign company can participate in the tendering process.
- The items mentioned in the negative imports list comprises not just simple parts but also some high technology weapon systems. It includes water jet fast attack craft to survey vessels, pollution control vessels, light transport aircraft, GSAT-6 terminals, radars, unmanned aerial vehicles, to certain rifles, artillery guns, bullet proof jackets, missile destroyers, etc.
- The embargo on imports is planned to be progressively implemented between 2020 to 2024.
- The Defence Ministry has also bifurcated the capital procurement budget for 2020-21 between domestic and foreign capital procurement routes.
- A separate budget head has been created with an outlay of nearly ₹52,000 crore for domestic capital procurement in the current financial year.
- The government intends to reach a turnover of $25 billion through indigenously manufactured defence products and also expects to export products worth $5 billion.
- The decision will offer a great opportunity to the Indian defence industry to manufacture the items in the negative list by using their own design and development capabilities or adopting the technologies designed and developed by the Defence Research Development Organisation (DRDO) to meet the requirements of the Armed Forces.
- Other initiatives taken earlier for the defence sector:
  - Raising the Foreign Direct Investment (FDI) in defence manufacturing from 49% to 74% under the automatic route
  - Improving the autonomy and accountability of the Ordnance Factory Board by their corporatisation
  - Building a time-bound defence procurement process and faster decision-making, including setting realistic general qualitative requirements of the weapons and equipment.

Comptroller and Auditor General of India

- G.C. Murmu has been appointed as Comptroller and Auditor General of India (CAG).
- Article 148 of the Constitution provides for an independent office of the Comptroller and Auditor General of India (CAG).
- The CAG is appointed by the President of India by a warrant under his hand and seal.
- He holds office for a period of six years or up to the age of 65 years, whichever is earlier.
- He can be removed by the President on the basis of a resolution passed to that effect by both the Houses of Parliament with special majority, either on the ground of proved misbehaviour or incapacity (on the same grounds and in the same manner as a judge of the Supreme Court).
- Article 149 authorises the Parliament to prescribe the duties and powers of the CAG in relation to the accounts of the Union and of the states and of any other authority or body.
Clauses of the Assam Accord

A high-level committee constituted by the Ministry of Home Affairs has submitted its recommendations on implementation of Clause 6 of the Assam Accord.

The committee chaired by Justice (retd) Biplab Kumar Sarma was constituted to define ‘Assamese People’ and institute safeguards for them.

The report said that the definition of ‘Assamese People’ for the purpose of implementation of Clause 6 of the Assam Accord should include Indigenous Tribals as well as other Indigenous Communities of Assam, all other citizens of India residing in the territory of Assam on or before 01.01.1951 and Indigenous Assamese — and their descendants.

The Assam Accord was a Memorandum of Settlement (MoS) signed between representatives of the Government of India, State Government of Assam and the leaders of the Assam Movement in 1985.

It sets a cut-off of midnight of March 24, 1971, for the detection of “illegal foreigners” in Assam and the National Register of Citizens (NRC) preparation in Assam uses the same cut-off but the Accord did not define who were eligible for the safeguards.

The report recommended numerous reservations for “Assamese people”:

- 80 to 100% of Assam’s seats in Parliament; and the same proportion in Assembly and local bodies (inclusive of pre-existing reservations).
- 80 to 100% of Group C and D level posts in all government and private sector jobs in Assam.
- 80%-100% of jobs under Government of Assam and State Government undertakings
- 70%-100% of vacancies in private partnerships including PPP model in Assam.

The recommendations also include the implementation of an Inner Line Permit regime in the state. The ILP is a system in which a special permit is required by people from other regions of India to visit the state.

It also recommended setting up of the Legislative Council of Assam whose seats will be reserved for the ‘Assamese people’.

The report also stressed that land rights be confined to the Assamese people by putting restrictions on transferring the same by any means to other persons other than Assamese people.

Demand for 6th Schedule Status for Arunachal Pradesh

Political parties and community-based groups have called for bringing the entire Arunachal Pradesh under the ambit of the Sixth Schedule or Article 371 (A) of the Constitution.

The call comes after the recent revival of the demand for two autonomous councils.

Currently, Arunachal Pradesh, bordering Bhutan, China and Myanmar, is under the Fifth Schedule that does not provide special rights for the indigenous communities unlike the Sixth Schedule.

Fifth and Sixth Schedules were discussed and passed by the Constituent Assembly in 1949.
The Fifth Schedule of the Constitution deals with the administration and control of scheduled areas and scheduled tribes in any state except the four states of Assam, Meghalaya, Tripura and Mizoram.

The Sixth Schedule of the Constitution deals with the administration of the tribal areas and currently includes 10 autonomous district councils in four northeastern States — Assam, Meghalaya, Mizoram and Tripura. This special provision is provided under Article 244(2) and Article 275(1) of the Constitution.

Case of Nagaland:
- Nagaland is governed by Article 371 (A), which says that no Act of Parliament shall apply in the State in several areas unless the Nagaland Assembly so decides by a resolution.
- These include administration of civil and criminal justice involving decisions according to Naga customary law and ownership and transfer of land and its resources.

**Whip**
- The office of ‘whip’ is mentioned neither in the Constitution of India nor in the Rules of the House nor in a Parliamentary Statute.
- It is based on the conventions of the parliamentary government. A whip is an official of a political party who acts as the party’s ‘enforcer’ inside the legislative assembly or house of parliament.
- He is charged with the responsibility of ensuring the attendance of his party members in large numbers and securing their support in favour of or against a particular issue. He is responsible for the party’s discipline and behaviour on the floor of the House.
- India inherited the concept of the whip from the British parliamentary system.
- A legislator may face disqualification proceedings if she/he disobeys the whip of the party unless the number of lawmakers defying the whip is 2/3rds of the party’s strength in the house.

**Limitations of whip:** There are some cases such as Presidential elections where whips cannot direct a Member of Parliament (MP) or Member of Legislative Assembly (MLA) to vote in a particular fashion.

**Types of whips:**
- One-line whip is issued to inform members of a party about a vote. It allows a member to abstain in case they decide not to follow the party line.
- Two-line whip is issued to direct the members to be present in the House at the time of voting.
- Three-line whip is issued to members directing them to vote as per the party line.

**Union Public Service Commission (UPSC)**
- Educationist Professor Pradeep Kumar Joshi was appointed as the chairman of the Union Public Service Commission (UPSC). His tenure as the chairman of the UPSC will be till May 12, 2021.
- UPSC is an independent constitutional body created directly by the Constitution under Articles 315 to 323.
- The UPSC consists of a chairman and other members appointed by the President of India. The Constitution, without specifying the strength of the Commission has left the matter to the discretion of the President, who determines its composition.
Further, no qualifications are prescribed for the Commission’s membership except that one-half of the members of the Commission should be such persons who have held office for at least ten years either under the Government of India or under the government of a state.

The chairman and members of the Commission hold office for a term of six years or until they attain the age of 65 years, whichever is earlier.

The President can remove the chairman or any other member of UPSC from the office under the following circumstances:

i) If he is adjudged an insolvent

ii) If he engages, during his term of office, in any paid employment outside the duties of his office; or

iii) If he is, in the opinion of the president, unfit to continue in office by reason of infirmity of mind or body.

iv) In addition to these, the president can also remove the chairman or any other member of UPSC for misbehaviour.

World Press Freedom Index (WPFI) 2020

- India has dropped two places down to be ranked 142nd out of 180 countries on WPFI.
- Norway is ranked first in the Index for consecutive fourth years.

About World Press Freedom Index

- It is released by Reporters Sans Frontières (RSF), or Reporters Without Borders.
- Based in Paris, it is an independent NGO with consultative status with the United Nations, UNESCO, the Council of Europe and the International Organization of the Francophonie (OIF).
- It works to document and combat attacks on journalists around the world. The Index ranks 180 countries and regions according to the level of freedom available to journalists.
- The criteria used for compiling the Index are pluralism, media independence, media environment and self-censorship, legislative framework, transparency, and the quality of the infrastructure that supports the production of news and information.
- It does not rank public policies even if governments obviously have a major impact on their country’s ranking. Nor is it an indicator of the quality of journalism in each country or region.

Global Report on Internal Displacement (GRID 2020)

- The Report was released by the Internal Displacement Monitoring Centre (IDMC). The centre is a part of the Norwegian Refugee Council.
- As per the report, at the end of 2019, there were 50.8 million internal displacements across the world.
- At least 33.4 million new displacements took place across 140 countries and territories in 2019 alone, out of which 8.5 million were related to conflict and violence, while 24.9 million due to disasters.
- Five countries with most displacement by conflict and violence in decreasing order are Syria, Congo, Ethiopia, Burkina Faso and Afghanistan.

India related Facts
Nearly five million people were displaced in India in 2019 — the highest in the world so far.

2019 was the seventh warmest year since 1901 in India; its monsoon was the wettest in 25 years and more than 2.6 million people suffered displacement due to the southwest monsoon.

Eight tropical storms hit in the year, including cyclone Maha, which hit Kerala and the Lakshadweep Islands. This was followed by Cyclone Bulbul, which struck Odisha and West Bengal, triggering 186,000 displacements.

In addition to displacement due to natural disasters, over 19,000 conflicts and violence also prompted the phenomenon. Political and electoral violence, especially in Tripura and West Bengal, led to the displacement of more than 7,600 people.

Global Rights Index

The International Trade Union Confederation (ITUC) released its seventh edition of the Global Rights Index that ranks 144 countries on the degree of respect for workers' rights.

The ranking of the countries has been made based on 97 metrics that includes a wide range of abuses including: workers’ rights, right to strike, freedom from violent conditions, violations of collective bargaining, excluding workers from joining unions, government surveillance on unions & their members, violence and killings and the limiting of freedom of speech etc.

Key Finding

India is among the 10 worst countries for working people and ten worst countries for workers in 2020 are: Bangladesh, Brazil, Colombia, Egypt, Honduras, India, Kazakhstan, the Philippines, Turkey and Zimbabwe.

Three new countries - India, Egypt and Honduras - have entered the list of ten worst countries for workers.

Around 85% of the countries violated the right to strike and 80% violated the right to collectively bargain.

Number of countries that denied freedom of speech has increased from 54 in 2019 to 56 in 2020.

The workers that were exposed to violence had restricted access to justice in 72% of the countries.

International Trade Union Confederation

It is the world's largest trade union federation, formed on 1 November 2006, out of the merger of the International Confederation of Free Trade Unions (ICFTU) and the World Confederation of Labour (WCL).

It is based in Brussels, Belgium.

Affordable Rental Housing Complexes

The Union Cabinet has given its approval for developing of Affordable Rental Housing Complexes (ARHCs) for urban migrants/poor as a sub-scheme under Pradhan Mantri Awas Yojana – Urban (PMAY – U).

The Ministry of Housing & Urban Affairs (MoHUA) had initiated ARHCs to fulfill the vision of 'AtmaNirbhar Bharat’. The ARHC scheme will be implemented through two models:

- Existing vacant government funded housing complexes will be converted in ARHCs through Concession Agreements for 25 years. States/UTs will select concessionaires through transparent bidding.
Special incentives like use permission, concessional loan at priority sector lending rate, tax reliefs at par with affordable housing etc. will be offered to private/public entities to develop ARHCs on their own available vacant land for 25 years.

- **Beneficiaries** for ARHCs are urban migrants/poor from EWS/LIG categories comprising of street vendors, rickshaw pullers and other service providers, industrial workers along with migrants working with market/trade associations, educational/health institutions, hospitality sector, long term tourists/visitors, students or any other category.

- An expenditure of **Rs 600 Crore** is estimated in the form of **Technology Innovation Grant** which will be released for projects using identified innovative technologies for construction.

- The scheme would create a conducive environment for Entities to develop AHRCs on their own vacant land which would enable new investment opportunities and promote entrepreneurship in the rental housing sector.

**Pradhan Mantri Awas Yojana – Urban (PMAY – U)**

- Pradhan Mantri Awas Yojana (Urban) (PMAY-U), a flagship Mission implemented by the Ministry of Housing and Urban Affairs (MoHUA), was launched in June 2015.

- The Mission addresses urban housing shortage among the EWS/LIG and MIG categories including the slum dwellers by ensuring a pucca house to all eligible urban households by the year 2022. PMAY(U) adopts a demand driven approach wherein the Housing shortage is decided based on demand assessment by States/UTs.

- The Mission covers the entire urban area consisting of Statutory Towns, Notified Planning Areas, Development Authorities, Special Area Development Authorities, Industrial Development Authorities or any such authority under State legislation which is entrusted with the functions of urban planning & regulations.

- The Mission promotes women empowerment by providing the ownership of houses in the name of female members or in joint name. Preference is also given to differently abled persons, senior citizens, SCs, STs, OBCs, Minority, single women, transgender and other weaker & venerable sections of the society.

- The scheme has been divided into four verticals:
  - ‘In-situ’ Slum Redevelopment (ISSR)
  - Credit Linked Subsidy Scheme (CLSS)
  - Affordable Housing in Partnership (AHP)
  - Beneficiary-led Construction/ Enhancement (BLC/ BLE)

**India Cycles4Change Challenge**

- The India Cycles4Change Challenge is an initiative of the Smart Cities Mission, Ministry of Housing and Urban Affairs, Government of India to inspire and support Indian cities to quickly implement cycling-friendly initiatives in response to COVID-19. The Challenge aims to help cities connect with their citizens as well as experts to develop a unified vision and initiatives to promote cycling.

- The Challenge is open to all cities under the Smart Cities Mission, capital cities of States/UTs, and all cities with a population of **more than 5 lakh population.**
The India Programme of the Institute for Transportation and Development Policy (ITDP) will be the knowledge partner of the Smart Cities Mission to assist the Mission in conducting this challenge and guiding cities in developing and implementing their proposals.

**Saansad Adarsh Gram Yojana**

- **Saansad Adarsh Gram Yojana (SAGY)** is a village development project launched by the Government of India in October 2014.
- Under the Yojana, Members of Parliament (MPs) will be responsible for developing the socio-economic and physical infrastructure of three villages each by 2019, and a total of eight villages each by 2024.
- The first Adarsh Gram must be developed by 2016, and two more by 2019. From 2019 to 2024, five more Adarsh Grams must be developed by each MP, one each year.
- **Objectives:**
  - The development of model villages, called Adarsh Grams, through the implementation of existing schemes, and certain new initiatives to be designed for the local context, which may vary from village to village.
  - Creating models of local development which can be replicated in other villages.
- Lok Sabha MPs can choose a village from their constituency, and Rajya Sabha MPs from the state from which they are elected. Nominated members can choose a village from any district of the country. MPs which represent urban constituencies can identify a village from a neighbouring rural constituency.
- **Funding:** No new funds have been allocated for the Yojana. Resources may be raised through:
  - Funds from existing schemes, such as the Indira Awas Yojana, Pradhan Mantri Gram Sadak Yojana, Mahatma Gandhi National Rural Employment Guarantee Scheme, and Backward Regions Grant Fund, etc.,
  - The Member of Parliament Local Area Development Scheme (MPLADS),
  - The gram panchayat’s own revenue,
  - Central and State Finance Commission Grants, and
  - Corporate Social Responsibility funds.
- **A web-based monitoring system** will be established to enable the MP and other stakeholders to monitor the scheme.

**BharatNet Project**

- BharatNet is implemented by Bharat Broadband Network Ltd. (BBNL) which is a Special Purpose Vehicle set up under Companies Act by Government of India with an authorized capital of Rs. 1000 Cr. It has been mandated to create the National Optical Fiber Network (NOFN) in India.
- The National Optical Fiber Network (NOFN) programme was launched in 2011 and was renamed as BharatNet programme in 2015.
- NOFN aims to connect all the 2,50,000 Gram panchayats in the country and provide 100 Mbps connectivity to all gram panchayats (GPs) through optical fibre. The objective is to facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet, and other services to rural India.
● The project is a **Centre-State collaborative project**, with the States contributing **free Rights of Way** for establishing the Optical Fibre Network.

● The entire project is being funded by **Universal service Obligation Fund (USOF)**, which was set up for improving telecom services in rural and remote areas of the country.

● The project is now an **integral part of the Digital India initiative** - the flagship programme to empower citizens digitally and to bridge the digital gap between rural and urban India.

**Swachh Survekshan 2021**

● The **Ministry of Housing & Urban Affairs (MoHUA)** has launched the toolkit for **Swachh Survekshan 2021**, the sixth edition of the annual cleanliness survey of urban India conducted by MoHUA.

● A new category of awards titled ‘**Prerak Dauur Samman**’ was added as part of Swachh Survekshan (SS) 2021. The Prerak Dauur Samman has a total of **five additional sub-categories** - Divya (Platinum), Anupam (Gold), Ujjwal (Silver), Udit (Bronze), Aarohi (Aspiring) - with top three cities being recognized in each.

● To ensure sustainability of the sanitation value chain, the new category will categorize cities on the basis of **six select indicator wise performance criteria** which are as follows:
  ○ Segregation of waste into Wet, Dry and Hazard categories
  ○ Processing capacity against wet waste generated
  ○ Processing and recycling of wet and dry waste
  ○ Construction & Demolition (C&D) waste processing
  ○ Percentage of waste going to landfills
  ○ Sanitation status of cities

● **Integrated SBM-Urban MIS portal** was also launched by the Ministry to bring the numerous **digital initiatives on a single platform** thus ensuring a unified and hassle-free experience for States and cities and leading the way towards the creation of not just a Swachh but a truly digital India.

● Since its **launch in 2014**, Swachh Bharat Mission-Urban (SBM-U) has made significant progress in the area of both sanitation and solid waste management. 4324 Urban ULBs have been declared ODF (4204 certified ODF), 1306 cities certified ODF+ and 489 cities certified ODF++.

● While Mysuru had won the award for the Cleanest City of India in the first edition of the survey, **Indore** has retained the top position for three consecutive years (2017, 2018, 2019).

**Pradhan Mantri Awas Yojana - Gramin**

● Pradhan Mantri Awas Yojana – Gramin (PMAYG), earlier known as **Indira Awaas Yojana (IAY)**, is a scheme for rural housing by the Indian Government.

● PMAY-G was launched on **20th November, 2016** with the **objective of the “Housing for All”**. It has the **target of construction of 2.95 crore houses with all basic amenities by the year 2022**.

● The construction cost of the houses will be shared in a **60:40 ratio between the Central and State governments in plain areas** and **90:10 for North Eastern and Himalayan States**. **100% financing** will be offered by the Central government for the construction of houses in **Union Territories**.
Under the scheme, rural masons will be trained with the objective of improving workmanship and quality of construction of houses while at the same time, increasing availability of skilled masons and enhancing employability of such masons.

Rashtriya Swachhata Kendra (RSK)

- Rashtriya Swachhata Kendra (RSK), an interactive experience centre on the Swachh Bharat Mission, was inaugurated by the Prime Minister of India.
- A tribute to Mahatma Gandhi, RSK was first announced by the Prime Minister on 10th April 2017, on the occasion of the centenary celebrations of Gandhi's Champaran Satyagraha.
- The installations at RSK will introduce future generations to the successful journey of the world's largest behaviour change campaign, the Swachh Bharat Mission.
- A balanced mix of digital and outdoor installations in the RSK will impart information, awareness and education on Swachhata and related aspects.
HISTORY AND CULTURE

Six Nation Peace Initiative
- The **Six Nation Peace Initiative** was a joint initiative in 1984 by **six heads of government** to help end the Cold War and the nuclear arms race between the **United States** and the **Soviet Union**.
- It **continued until 1989** and was also sometimes referred to as the **Five Continent Peace Initiative**.
- The original **six leaders were**: President Raúl Alfonsin of **Argentina**, Prime Minister Indira Gandhi of **India**, President Miguel de la Madrid of **Mexico**, President Julius Nyerere of **Tanzania**, Prime Minister Olof Palme of **Sweden**, and Prime Minister Andreas Papandreou of **Greece**.
- During the following five years, Indira Gandhi was replaced upon her death by Prime Minister Rajiv Gandhi of India, and Olof Palme by Prime Minister **Ingvar Carlsson of Sweden**.
- The Six Nation Peace Initiative was convened by the **New York-based parliamentary network Parliamentarians for Global Action (PGA)**.
- It held **summit meetings** in New Delhi, India (1985), Athens, Greece (1985), Ixtapa, Mexico (1986), and Stockholm, Sweden (1987).

Gaan-Ngai Festival
- It is a **post-harvest** festival celebrated by **Zeliangrong people** who are spread across **Assam, Manipur, and Nagaland**.
- It is a **festival (Nagi)** of **Gaan (Dry or winter season)** and is also known as the **Chakan Gaan-Nagi**, the **festival** of the **winter season**.

Kotla Narsimhlupalle Village
- A **statue of Lord Mahaveera** was unearthed in Kotla Narsimhlupalle village (Karimnagar district, **Telangana**) in June 2020.
- An idol belonging to the **23rd Jain Theerthankara called Parshvanatha** was found in the same fields on June 13, 2007.
- This spot is just **15 km away from Bommalammagutta**, which was the **first capital of Rashtrakuta dynasty**, which ruled the **Telangana** region and adopted Jainism.
- The village is known for historical reasons because of the location of the hillock ‘Devuni Gutta’ which houses the ancient **Sri Laxmi Narasimha Swamy and Sri Annapoorna Vishwanatha temples** dating back to 7th and 8th century of Imperial **Rashtrakutas**.
- The **unique and rare sculptures (Bas-Relief)** of **Shodasha Babu Pancha Mukha Ugra (Bhargava) Narasimha** seen here belong to the 4th and 5th century of **Rashtrakutas**.
- On top of the hillock, one could find the remains of an **ancient fort**. It is said that after the fall of **Nanda dynasty** and installation of Mourya dynasty, one of the Nandas fled from Pataliputra and had taken **shelter** on this **hillock**. The village is surrounded by a **mud fort (kota)** and hence the village is called **Kotla Narasimhlupalle**.
Abdul Hamid Lahori
- **Abdul Hamid Lahori** was a **traveller** and **historian** during the period of Mughal Emperor **Shah Jahan** who later became a court historian of Shah Jahan (**Shah Jahan's official chronicler**).
- He wrote the **book Padshahnama**, about the reign of Shah Jahan. He has described **Shah Jahan’s life and activities**.
- He also writes that the construction of **Taj Mahal** began six months after Empress Mumtaz Mahal’s death which was on 17 June 1631.

Bon Bibi
- Shrines to Bon Bibi and her twin brother Shah Jongoli are found in the **landscape of the Sundarbans**.
- Bon Bibi is a **deity of the forest** and the central character of **Bon Bibir Palagaan**, a **musical drama unique to the Sundarbans**.
- The followers of Bon Bibi are fishermen, crab-collectors and honey-gatherers — a large chunk of the population of the islands, many of them impoverished — who go into the wild mangroves, teeming with wild animals such as tigers and crocodiles, to earn a livelihood.
- They believe that only Bon Bibi protects them when they enter the forest.

Sankalp Parva
- The Ministry of **Culture** celebrated ‘**Sankalp Parva**’ to plant trees from **28th June to 12th July 2020**.
- It has been called for planting at **least five trees** either in Officecampus or wherever it is possible, to ensure a clean and healthy environment of the country.
- The Ministry of Culture recommended planting **five trees** which represent the herbal heritage of our country. These trees are (i) “**Bargad**” (ii) “**Awla**” (iii) “**Pepal**” (iv) “**Ashok**” (v) “**Bel**”.

Rabari, Bharvad and Charan Tribes of Gujarat
- The Gujarat government will constitute a **five-member commission** to identify the members of Rabari, Bharvad and Charan communities of Gir, Barda and Alech areas of the state, who are eligible to get the benefits of Schedule Tribe (ST) status.
- The commission, which will be headed by a **retired judge of the high court**, comprises two district judges, one retired forest officer and one retired revenue officer.

Rabari Tribe
- The Rabari, also called the Rewari or Desai, are an indigenous tribal caste of **nomadic cattle and camel herders** and shepherds that live throughout northwest India, primarily in the states of **Gujarat, Punjab and Rajasthan**.
- They speak ‘**Bhopa**’ which is a mixture of Gujarati, Kachchi, Marwari words and **Pharasi (Persian)** and use **Gujarati script**.
- The Rabari are known for their distinctive art, particularly the mirrored and whitewashed **mud sculpture-work** that adorns their homes and villages.
- Rabari women are responsible for this artwork and also traditionally spin the wool from their sheep and goats and give it to local weavers to make their woollen skirts, veils, blankets and turbans.
Bharvad Tribe

- The Bharwad are tribals primarily engaged in herding livestock.
- The Bharwads have numerous subgroups known as ataks or guls (clans) whose main purpose is to determine eligibility for marriage.
- Constrained exogamy is practised between clans.

Charan Tribe

- The Charan, also called Gadhvi, is a small tribe in Gujarat and the name Charan is derived from the word ‘Char’ which means grazing.
- Members of the caste are considered to be divine by a large section of society.
- Women of the caste are adored as mother goddesses by other major communities of this region.

Padmanabhaswamy Temple

- Reversing the 2011 Kerala High Court decision, the Supreme Court upheld the right of the Travancore royal family to manage the property of deity at Sree Padmanabha Swamy Temple in Thiruvananthapuram.
- The court said that, as per customary law, the shebait rights (right to manage the financial affairs of the deity) survive with the members of the family even after the death of the last ruler.
- Historians say the Padamanabhaswamy temple dates back to the 8th century but the present structure was built in the 18th century by the then Travancore Maharaja Marthanda Varma.
- The temple is built in the unique Chera style of architecture, and its main deity is Lord Vishnu who is found in the Anantha Shayana posture (reclined posture of eternal yoga) on Adishesha or king of all serpents.
- It is known to be one of the 108 holy temples associated with Vaishnavism in India.

Antifa

- Antifa is a useful umbrella term that denotes a broad spectrum of groups and individuals of far left or anarchist tendencies. The term itself means simply anti-fascist.
- The antifa movement traces its heritage to radical left groups that resisted dictators such as Mussolini and Hitler in Europe in the 1930s. In Germany, the communist-aligned Antifaschistische Aktion fought street battles with Hitler’s followers until it was forcibly disbanded in 1933.
- This tradition was revived in Europe during the 1980s and 1990s, with the rise of Nazi skinheads and other far right groups. It arrived in the US in the late 1980s, with the creation of Anti-Racist Action (ARA) in Minneapolis.
- ARA no longer exists and the oldest identifiable group in the US is probably Portland’s Rose City Antifa, which dates from 2007.
- Contemporary antifa groups have a distinctive repertoire of tactics ranging from publicly identifying members of far-right groups, to physically resisting them in the streets. Often, in street protests, activists dress in “black bloc” attire including balaclavas or masks to conceal their identity.
SPIC MACAY

- **SPIC MACAY** (Society for the Promotion of Indian Classical Music And Culture Amongst Youth) is a non-political, nationwide, voluntary movement *founded in 1977* by Dr. Kiran Seth, Professor-Emeritus at IIT-Delhi who was awarded the ‘Padma Shri’ for his contribution to the arts in *2009*.

- SPICMACAY’s intention is to enrich the quality of formal education by increasing awareness about different aspects of Indian heritage and inspiring the young mind to imbibe the values embedded in it.

- In *2011*, SPIC MACAY was awarded the Rajiv Gandhi Sadbhavana award in recognition of its contribution to youth development.

- It has a central executive body in New Delhi and organises its cultural programmes through a worldwide network of schools, colleges and educational institutions. SPIC MACAY garners national support by the Ministry of Culture, Ministry of Youth Affairs and Sports, and the HRD Ministry.

Kolkata Port Trust renamed as Syama Prasad Mookerjee

- The Union Cabinet has given its approval to rename Kolkata Port as **Syama Prasad Mookerjee Port**.

- The Kolkata Port is the first Major Port as well as the only riverine port of the country. It came to be governed by a Trust in 1870 on appointment of the Commissioners for Improvement of the Port of Calcutta as per Act V of 1870.

- It features at Serial Number 1 in *The First Schedule, Part I—Major Ports of the Indian Ports Act, 1908* and is governed by the Major Port Trusts Act, 1963.

- Kolkata Port has traversed 150 years and in this journey, it has been India’s gateway to trade, commerce and economic development. It has also been a witness to India’s struggle for independence, World Wars I & II and socio-cultural changes taking place in the country, especially in Eastern India.

Naming of major ports in India

- Generally, the Major Ports in India are named after the city or the town in which they are situated. Some ports, however, in special cases or in due consideration of contributions made by eminent leaders have been re-named after great national leaders in the past.

- Nhava Sheva Port Trust was renamed as **Jawaharlal Nehru Port Trust** by the Government in the year *1989*.

- The Tuticorin Port Trust was renamed as V.O. Chidambaranar Port Trust in the year 2011 and the Ennore Port Limited has been re-named as Kamarajar Port Limited in the honour of Shri K Kamarajar, eminent freedom fighter and former Chief Minister of Tamil Nadu. Recently, in *2017* **Kandla Port was re-named as Deendayal Port**.

NAIMISHA 2020

- **National Gallery of Modern Art (NGMA)**, New Delhi has announced **ONLINE NAIMISHA 2020-Summer Art Program** from 8th June 2020 to 3rd July 2020.

- The month-long ONLINE summer program by NGMA, New Delhi is an initiative to provide a chance to its participants to create and learn from practicing artists without compromising their health.

- **Four inclusive workshops** have been planned by NGMA to engage and increase engagement virtually:
○ Painting workshop
○ Sculpture workshop
○ Printmaking
○ Indrajaal - The Magic of Art (Interdisciplinary creative workshop to understand Freedom)

**Talamaddale**

- Talamaddale is an **ancient and traditional art form** of India and a variation of the **Yakshagana theater**.
- It is an ancient form of dance practiced in Southern India in the coastal Malnad regions of **Karnataka** and **Kerala**.
- Unlike the Yakshagana performance, in the conventional talamaddale, the artists sit across in a place without any costumes and engage in testing their oratory skills based on the episode chosen.
- While the music is common for both Yakshagana performance and talamaddale, the latter has only spoken words without any dance or costumes. Hence it is an **art form minus dance, costumes and stage conventions**.

**Pashupatinath Temple**

- A Memorandum of Understanding was signed between the Indian Embassy, Nepal’s Ministry of Federal Affairs and General Administration and the Kathmandu Metropolitan City for the construction of the sanitation facility at the **Pashupatinath Temple**.
- Under the initiative, India has pledged to extend financial assistance amounting to NRs 37.23 million (₹2.33 crore) for the sanitation facility that would be implemented by the Kathmandu Metropolitan City in accordance with the norms laid out by Government of Nepal in 15 months.
- Pashupatinath Temple is the largest temple complex in **Nepal** and stretches on **both sides of the Bagmati River** and sees thousands of worshippers from Nepal and India every day.
- The temple is dedicated to **Lord Shiva** and is one of the most important religious sites in Asia for devotees of Shiva.
- **Only Hindus are allowed** through the gates of the main temple.
- It was conferred the status of a **World Heritage Site in 1979** by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

**Axone**

- Axone, also spelled **akhuni**, is a fermented soya bean of **Nagaland**, known for its distinctive flavour and smell. As much an ingredient as it is a condiment, axone used to make pickles and chutneys, or curries of pork, fish, chicken, beef etc.
- While it is called ‘axone’ in parts of Nagaland, fermented soya bean is cooked with, eaten and known by different names in different parts of Northeast India, including Meghalaya and Mizoram, Sikkim, Manipur as well in other South, Southeast and East Asian countries of Nepal, Bhutan, Japan, Korea, China, Myanmar, Vietnam and Indonesia. It is the one food that **connects the Eastern Himalayas**.
- Axone is prepared and eaten across Nagaland but is particularly popular among the **Sumi (also Sema) tribe**.
Chaolung Sukapha

- Chaolung Sukapha was a 13\textsuperscript{th} century ruler who founded the Ahom kingdom that ruled Assam for six centuries. Contemporary scholars trace his roots to Burma.
- He reached Brahmaputra valley in Assam from upper Burma in the 13\textsuperscript{th} century with around 9,000 followers.
- It was in Charaideo that Sukapha established his first small principality, sowing the seeds of further expansion of the Ahom kingdom.
- The founders of the Ahom kingdom had their own language and followed their own religion. Over the centuries, the Ahoms accepted the Hindu religion and the Assamese language, however, they did not impose theirs on those living here.
- Sukapha developed very amiable relationships with the tribal communities living here — especially the Sutias, the Morans and the Kacharis. Intermarriage also increased assimilation processes.
- Sukapha’s significance lies in his successful efforts towards assimilation of different communities and tribes. He is widely referred to as the architect of “Bor Asom” or “greater Assam”.
- To commemorate Sukapha and his rule, Assam celebrates “Asom Divas” on December 2 every year.

International Day of Yoga

- Coinciding with the summer solstice, June 21 is observed as International Yoga Day, recognising the many benefits of the ancient Indian practice of yoga. The year 2020 marks the 6\textsuperscript{th} International Yoga Day.
- The United Nations theme for this year is “Yoga for Health – Yoga at Home”.
- The UN proclaimed June 21 as International Day of Yoga by passing a resolution on December 11, 2014, during the 69\textsuperscript{th} session of the General Assembly.
- The word ‘yoga’ is derived from Sanskrit and means to join or to unite, symbolising the union of a person’s body and consciousness.
- Yoga is an ancient physical, mental, and spiritual practice that originated in India. The word ‘yoga’ is derived from Sanskrit and means to join or to unite, symbolizing the union of body and consciousness.
- As part of the 6th International Yoga Day commemorations, the world's first yoga university outside India has been launched in Los Angeles, offering programmes that combine scientific principles and modern research approaches to the ancient Indian practice of yoga. It has been named after Swami Vivekananda - Vivekananda Yoga University.

Variyamkunnath Kunjahammed Haji

- Kunjahammed Haji is an important figure in the echelons of Kerala's colonial history as a rebel leader who took on the mighty British Raj.
- He was born into an affluent Muslim family sometime in the 1870s and grew up hearing stories of the injustice meted out by the British to the locals and to his own family. His father, Moideenkutty Haji, was deported and jailed in the Andaman Islands for his participation in a rebellion against the British.
- Haji’s was fascinated with traditional music-based art forms like Daffumutt and poems like ‘Malappuram Padappattu’ and ‘Badr Padappattu’ and he used art as an instrument to rally the locals against the British.
By invoking such poems, that spoke of the exploitation of the peasants by feudal lords under the British and which were later banned by them, Kunjahammed Haji was simultaneously challenging the British and igniting sentiments against them among the local population. These acts were a continuation of a stream of anger that had begun to strengthen against the colonialists, and which is believed to have resulted in the Malabar uprising in 1921.

Kunhahammed Haji was respected for his scholarship and knowledge in Urdu, Arabic and English.

Mar Thoma Church

The Malankara Mar Thoma Syrian Church, also known as the Mar Thoma Church, is one of the oldest denominations of Christianity in Kerala.

It is believed that the church was founded by Saint Thomas in 52 AD.

The Mar Thoma Church is closely linked with the noble ideals of Saint Thomas, the Apostle of Lord Christ.

The Mar Thoma Church played a role in India’s freedom struggle. The Church was at the fore-front of working towards national integration.

Indira Gandhi National Centre for the Arts

The Indira Gandhi National Centre for the Arts (IGNCA) was established in 1987 as an autonomous institution under the Ministry of Culture, as a centre for research, academic pursuit, and dissemination in the field of the arts.

The Arts’ encompass a wide range of subjects – from archaeology and anthropology to the visual and performing arts, enveloping them in a complementary and non-demarcated vision.

The centre is visualised as a centre encompassing the study and experience of all the arts—each form with its own integrity, yet within a dimension of mutual interdependence, interrelated with nature, social structure, and cosmology.

The IGNCA has a trust (Board of Trustees), which meets regularly to give general direction about the Centre’s work. The Executive Committee, drawn from among the Trustees, functions under a Chairman.

IGNCA is the research unit of the Project Mausam, which is a Ministry of Culture project with Archaeological Society of India (ASI), New Delhi as the nodal agency.

Tangam Community and their Language

Arunachal Pradesh Chief Minister released a book titled “Tangams: An Ethnolinguistic Study Of The Critically Endangered Group of Arunachal Pradesh.”

Only 253 speakers are left, and they are concentrated in one small hamlet of Arunachal Pradesh, as per the survey of Centre for Endangered Languages (CFEL) of Rajiv Gandhi University (RGU).

The Tangams are a little-known community within the larger Adi tribe of Arunachal Pradesh and reside in the hamlet of Kugging in Upper Siang district’s Paindem circle.

For long, the only account of the Tangams could be found in bureaucrat Tarun Kumar Bhattacharjee’s book, Tangams (1975) where the community’s population was pegged at 2,000 spread across 25 villages.
As per the UNESCO World Atlas of Endangered Languages (2009), Tangam — an oral language that belongs to the Tani group, under the greater Tibeto-Burman language family — is marked ‘critically endangered’.

Red Book of Endangered Languages

- The Red Book of Endangered Languages was published by UNESCO and collected a comprehensive list of the world's endangered languages. It has been replaced by the UNESCO Atlas of the World’s Languages in Danger.
- In February 2009, UNESCO launched an online edition of the Atlas of Endangered Languages which covers the whole world, contains much more information than previous printed editions and offers the possibility to users to provide online feedback, in view of its constant updating.

Mongolian Kanjur

- The Ministry of Culture has taken up the project of reprinting 108 volumes of Mongolian Kanjur under the National Mission for Manuscripts (NMM). It is expected that all the volumes will be published by March 2022.
- Mongolian Kanjur is the Buddhist canonical text in 108 volumes which is considered to be the most important religious text in Mongolia.
- In the Mongolian language 'Kanjur' means ‘Concise Orders’- the words of Lord Buddha in particular. It is held in high esteem by the Mongolian Buddhists and they worship the Kanjur at temples and recite the lines of Kanjur in daily life as a sacred ritual.
- The Kanjur are kept in almost every monastery in Mongolia. Mongolian Kanjur has been translated from Tibetan. The language of the Kanjur is Classical Mongolian. The Mongolian Kanjur is a source of providing a cultural identity to Mongolia.

National Mission for Manuscripts (NMM)

- The National Mission for Manuscripts was launched in February 2003 by the Government of India, under the Ministry of Tourism and Culture. The mission is presently under the Ministry of Culture.
- National Mission for Manuscripts is a national level comprehensive initiative which caters to the need of conserving manuscripts and disseminating knowledge contained therein. NMM is working towards fulfilling its motto, ‘conserving the past for the future’.
- One of the objectives of the mission is to publish rare and unpublished manuscripts so that the knowledge enshrined in them is spread to researchers, scholars, and the general public at large.

Dharma Chakra Day

- The International Buddhist Confederation (IBC) in partnership with the Ministry of Culture, Government of India, celebrated the Asadha Poornima on July 4, 2020 as Dharma Chakra Day. It was the annual flagship event of IBC.
● The auspicious day of Asadha Poornima falls on the first full moon day of the month of Asadha as per Indian sun calendar.

● It is also known as Esala Poya in Sri Lanka and Asanha Bucha in Thailand. It is the second most sacred day for Buddhists after the Buddha Poornima or Vesak.

● The day marks Buddha’s first teaching after attaining Enlightenment to the first five ascetic disciples (pañcavargika) on the full-moon day of Asadha at ‘Deer Park’, Riṣipatana in the current day Sarnath, near Varanasi, India.

● This teaching of Dhamma Cakka- PavattanaSutta (Pali) or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the First Turning of Wheels of Dharma and comprised of the Four Noble Truths and Noble Eightfold Path.

● The Rainy Season retreat (Varsha Vassa) for the Monks and Nuns also starts with this day lasting for three lunar months from July to October, during which they remain in a single place, generally in their temples dedicated to intensive meditation.

● They are served during this period by the lay community who also observe Uposatha i.e. to observe eight precepts and meditate under the guidance of their teachers.

● The day is also observed as Guru Poornima by both Buddhists and Hindus as a day to mark reverence to their Gurus.

Raja Parba Festival

● The Raja Parba is one of the most popular festivals of Odisha. This is a three-day-long festival dedicated to Mother Earth (Bhuma Devi) and womanhood at large. The festivities begin a day before Mithuna Sankranti and conclude two days after that.

● The first day of the festival is called Pahili Raja, the second is Mithuna Sankranti and the third Bhu daha or Basi Raja. The preparation begins one day before Pahili Raja, and it is called Sajabaja. Primarily, it is a time for the unmarried girls to prepare for their matrimony.

● It is believed that during this period Goddess Earth (Bhuma Devi), the consort of Lord Vishnu, undergoes her menstrual cycle during this period.

● During the Parba, Odia people do not undertake any construction works or tilling that requires the earth to be dug. And by not doing such activities, they pay ode to the Mother Earth who needs a break from routine work.

● The festival concludes with a custom called Vasumati Snana or the bathing of Bhuma Devi. Women worship a stone that symbolises Mother Earth.

● This festival is also associated with the end of the summer season and the arrival of the monsoon.

Raja Ravi Verma

● April 29 is the birth anniversary of the famed Indian painter Raja Ravi Varma (1848-1906), remembered for giving Indians their western, classical representations of Hindu gods and goddesses.

● His works are held to be among the best examples of the fusion of European techniques with a purely Indian sensibility. While continuing the tradition and aesthetics of Indian art, his paintings employed the latest European academic art techniques of the day.

● He is also known for having mastered the reproduction of his work on the lithographic press—through which his paintings spread far and wide.
Awards and Honour

- His 1873 painting ‘Nair Lady Adorning Her Hair’ won Varma prestigious awards including Governor’s Gold Medal when it was presented in the Madras Presidency, and Certificate of Merit at an exhibition in Vienna.
- In 1904, the British colonial government awarded Varma with the Kaiser-i-Hind Gold Medal.
- In 2013, a crater on the planet Mercury was named in his honour.

Khongjom Day Celebrated
- Manipur celebrated Khongjom day on April 23.
- Every year, this day is celebrated to pay tribute to the war heroes of Anglo-Manipuri War 1891 who had sacrificed their lives fighting against the British to protect freedom of Manipur.

World Heritage Day
- 18th April is celebrated as the International Day for Monuments and Sites or the World Heritage Day every year.
- The day was proposed by the International Council on Monuments and Sites (ICOMOS) in 1982 and approved by the General Assembly of UNESCO in 1983.
- The theme this year is “Shared Cultures, Shared Heritage, Shared Responsibility”.

ICOMOS
- It is a global non-governmental organization associated with UNESCO.
- It is an Advisory Body of the World Heritage Committee for the implementation of the World Heritage Convention of UNESCO.
- Headquartered in Paris, ICOMOS was founded in 1965 in Warsaw as a result of the Venice Charter of 1964.
- It is a partner and founding member of the Blue Shield, which works to protect the world’s cultural heritage threatened by wars and natural disasters.

World Heritage Week
- The World Heritage Week is celebrated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) every year from November 19 to November 25.

United Nations Educational, Scientific and Cultural Organization
- It was founded in 1945 to develop the “intellectual and moral solidarity of mankind” as a means of building lasting peace.
- It is located in Paris, France.

World Heritage Site
- To be selected as a World Heritage Site by UNESCO, it must be an already classified landmark, unique in some respect as a geographically and historically identifiable place having special cultural or physical significance. It may signify a remarkable accomplishment of humanity, and serve as evidence of the intellectual history on the planet.
- The sites are intended for practical conservation for posterity, which otherwise would be subject to risk from human or animal trespassing or threat from local administrative negligence.
● There are three types of sites: cultural, natural, and mixed. India has a total of 38 recognised heritage sites: Cultural (30), Natural (7) and Mixed (1).

National List of Intangible Cultural Heritage

● The Ministry of Culture has released the draft National List of Intangible Cultural Heritage (ICH) of India. The initiative is a part of the ministry’s Vision 2024 programme.

● At present, the list has more than 100 elements including the 13 elements of India recognised on the UNESCO Representative List of the Intangible Cultural Heritage.

● The National List of ICH is an attempt to recognize the diversity of Indian culture embedded in its intangible heritage. It aims to raise awareness about the various intangible cultural heritage elements from different states of India at national and international level and ensure their protection.

● Following UNESCO’s 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, this list has been classified into five broad domains in which intangible cultural heritage is manifested:
  i) Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
  ii) Performing arts
  iii) Social practices, rituals and festive events
  iv) Knowledge and practices concerning nature and the universe
  v) Traditional craftsmanship

● The present items in the list have been collated from the projects sanctioned under the scheme for ‘Safeguarding the Intangible Cultural Heritage and Diverse Cultural Traditions of India’ formulated by the Ministry of Culture.

UNESCO’s List of Intangible Cultural Heritage:

● UNESCO established it’s Lists of Intangible Cultural Heritage with the aim of ensuring better protection of important intangible cultural heritages worldwide and the awareness of their significance.

● The list was established in 2008 when the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage took effect.

● List of Intangible Cultural Heritage Sites from India:
  1. Ramlila, the traditional performance of the Ramayana
  2. Tradition of Vedic chanting
  3. Kutiyattam, Sanskrit theatre
  4. Ramman, religious festival and ritual theatre of the Garhwal Himalayas.
  5. Mudiyettu, ritual theatre and dance drama of Kerala
  6. Kalbelia folk songs and dances of Rajasthan
  7. Chhau dance
  9. Sankirtana, ritual singing, drumming and dancing of Manipur
  10. Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab
  11. Yoga
12. Nowruz

13. Kumbh Mela

Central Vista Redevelopment Project
- The Central Vista Redevelopment Project was proposed by the Union Ministry of Housing and Urban Affairs in 2019.
- The aim is to improve the old buildings on Raisina Hills, make improved Common Secretariat Buildings, refurbish old Parliament building, make new space for new requirements of MPs and upgrade the entire Central Vista area.
- The project includes construction of a new triangular Parliament building next to the existing heritage structure and the larger revamp of the entire 3-km Central Vista from Rashtrapati Bhavan till India Gate.
- The Central Vista (New Delhi) currently houses Parliament House, Rashtrapati Bhavan, India Gate, North and South Block and National Archives.
- The buildings on Raisina Hills were designed by Sir Edwin Lutyens and Sir Herbert Baker and constructed in the period from 1911 to 1931.
  - The Rashtrapati Bhavan was designed by Edwin Lutyens while the Secretariat including both North and South Block was designed by Herbert Baker.
  - The Parliament House building was designed by both Lutyens and Baker.

Ambubachi Mela
- The Ambubachi Mela is an annual Hindu mela held at Kamakhya Temple in Guwahati, Assam. The fair is organised from June 21-25 every year.
- It is celebrated during the monsoon season that happens to fall during the Assamese month Ahaar, around the middle of June when sun transit to the zodiac of Mithuna, when the Brahmaputra river is in spate.
- It is the celebration of the yearly menstruation course of goddess Kamakhya. It is believed that the presiding goddess of the temple, Devi Kamakhya, the Mother Shakti, goes through her annual cycle of menstruation during this time stretch.
- It is also believed that during the monsoon rains the creative and nurturing power of the ‘menses’ of Mother Earth becomes accessible to devotees at this site during the mela.
- The attainment of womanhood of girls in Assam is celebrated with a ritual called Tuloni Biya, meaning small wedding.
- A similar custom is followed at the Devi Temple at Chengannur town in Alleppey district of Kerala.
- The Kamakhya Temple, also known as Kamrup-Kamakhya temple, Kamakhya Devalaya, is a Hindu temple dedicated to the mother goddess Kamakhya. It is situated on the Nilachal Hill in western part of Guwahati, Assam.
- Kamakhya is one of 51 shakti peethas or holy sites for the followers of the Shakti cult, each representing a body part of the Sati, Lord Shiva’s companion.
- The temple’s sanctum sanctorum houses the yoni – female genital – symbolised by a rock.
Khudai Khidmatgar Movement

- The Khudai Khidmatgar was a nonviolent movement led by Abdul Ghaffar Khan against British occupation of the Indian subcontinent.
  - Abdul Ghaffar Khan was a Pashtun freedom fighter in the North-West Frontier Province.
- Over time, the movement acquired a more political colour, leading to the British taking notice of its growing prominence in the region.
- Members of the Khudai Khidmatgar were organised and the men stood out because of the bright red shirts they wore as uniforms, while the women wore black garments.

Qissa Khwani Bazaar massacre

- Abdul Ghaffar Khan and other leaders of the Khudai Khidmatgar were arrested on April 23, 1930 by British police after he gave a speech at a gathering in the town of Utmanzai in the North-West Frontier Province.
- A respected leader well-known for his non-violent ways, Khan’s arrest spurred protests in neighbouring towns, including Peshawar. Protests spilled into the Qissa Khwani Bazaar in Peshawar on the day of Khan’s arrest.
- British soldiers entered the market area to disperse crowds that had refused to leave. In response, British army vehicles drove into the crowds, killing several protesters and bystanders. British soldiers then opened fire on unarmed protestors, killing even more people. It is 90 years since the Qissa Khwani Bazaar massacre.
- In August 1931, the Khudai Khidmatgar aligned themselves with the Congress party, forcing the British to reduce the violence they perpetrated on the movement.
- The Khudai Khidmatgar opposed Partition, a stance that many interpreted as the movement not being in favour of the creation of the independent nation of Pakistan.

Global Basava Jayanti

- Global Basava Jayanti is an annual event, celebrated on 26th April, in the honour of the birth of Vishwaguru Basaveshwara.
- Vishwaguru Basaveshwara, popularly known as Basavanna, was a 12th-century Indian statesman, philosopher, poet, and social reformer.
- Basaveshwara was born in Bagevadi (of undivided Bijapur district in Karnataka) during 1131 AD. He is the founding saint of the Lingayat sect.
- Basaveshwara gave two very important socio-economic principles: - “Kayaka” (Work-Divine work) and “Dasoha” (Distribution-Equal distribution).
- His spiritual discipline was based on the principles of:
  - Arivu (true knowledge)
  - Achara (right conduct)
  - Anubhava (divine experience)
- His practical approach and act of establishment of ‘Kalyana Rajya’ (Welfare state) brought a new status and position for all the citizens of the society, irrespective of class, caste, creed and sex.
- He established the Anubhava Mantapa, which was a common forum for all to discuss the prevailing problems of socio, economic and political areas.
- Basavanna literary works include the Vachana Sahitya in Kannada Language.
The Prime Minister of India also inaugurated the statue of Basavanna along the bank of the river Thames at Lambeth in London in November 2015.

**Thrissur Pooram**
- Thrissur Pooram is an annual Hindu festival held in Kerala. It is celebrated at the Vadakkunnathan Temple in Thrissur every year on the day when the star sign “Pooram” occurs in the Malayalam month of “medam (April-May)”.  
- Thrissur Pooram was the brainchild of Raja Rama Varma, popularly known as Sakthan Thampuran, the Maharaja of Cochin (1790–1805).  
- The Pooram consists of ten temples in and around Thrissur and is centred on the Vadakkunnathan Temple, with all these temples sending their processions to pay obeisance to the Shiva, the presiding deity.  
- The Pooram officially begins with a flag hoisting ceremony, Kodiyyettam, which starts seven days before Thrissur Pooram.  
- The seventh day of the pooram, also known as “Pakal Pooram”, is the last day.

**Pulitzer Prize**
- The Pulitzer Prize is an award for achievements in newspaper, magazine and online journalism, literature, and musical composition in the United States.  
- It was established in 1917 by provisions in the will of Joseph Pulitzer who had made his fortune as a newspaper publisher and later gave money in his will to Columbia University to launch a journalism school and establish the Prize.  
- It is administered by Columbia University.  
- Recently, three Indian journalists have been honoured with the 2020 Pulitzer Prize in the field of feature photography.

**Buddha Purnima**
- Buddha Purnima 2020 was celebrated on 7th May, marking the birth anniversary of Gautam Buddha, founder of Buddhism.  
- Buddha Purnima, also known as Buddha Day or Vesak Day, falls on a full moon day in the month of Vaisakh (April/May) according to the Hindu calendar.  
- Vesak- Buddha Poornima, is considered the Triple Blessed Day as Tathagata Gautam Buddha’s Birth, Enlightenment and Maha Parnirvana.  
- In Theravada Buddhism, it is also observed as the day when Buddha attained Nirvana (salvation) under the Mahabodhi tree at Bodh Gaya, Bihar, as well as his death anniversary.  
- The General Assembly, by its resolution in 1999, recognized internationally the Day of Vesak to acknowledge the contribution that Buddhism has made to the spirituality of humanity.

**Jagannath Rath Yatra**
- Jagannath Rath Yatra, also known as Rathjatra or Chariot Festival, is a Hindu festival associated with Lord Jagannath held at Puri in Odisha.
● Rath Yatra is celebrated on Ashadha Shukla Dwitiya, meaning the 2nd day of the bright fortnight of Ashadha (June- July of Roman calendar) every year.

● The cart festival is said to be the oldest of its kind and marks the return of Lord Krishna to Vrindavan with his brother Balabhadra and sister Subhadra.

● The festival commemorates Jagannath’s annual visit to Gundicha Temple via Mausi Maa Temple (aunt's home) near Balagandi Chaka, Puri.

● The Jagannath Temple of Puri is an important Hindu temple dedicated to Jagannath, a form of Vishnu, in Puri, Odisha on the eastern coast of India.

● The temple is believed to be constructed by King Anataravaran Chodaganga Deva of the Eastern Ganga Dynasty in the 12th century.

● This temple is a part of Char Dham pilgrimages (Badrinath, Dwaraka, Puri, Rameswaram) and is called the White Pagoda.

● Jagannath Puri temple is also called Yamanika Tirtha where, according to the Hindu beliefs, the power of ‘Yama’, the god of death has been nullified in Puri due to the presence of Lord Jagannath.

● The temple has four distinct sectional structures, namely -
   i. Deula, Vimana or Garba griha (Sanctum sanctorum)
   ii. Mukhashala (Frontal porch)
   iii. Nata mandir/Nata Mandapa, which is also known as the Jagamohan (Audience Hall/Dancing Hall)
   iv. Bhoga Mandapa (Offerings Hall)

Maharana Pratap

● May 9th marks the birth anniversary of Maharana Pratap. This year is his 480th birth anniversary.

● Maharana Pratap was the second son of King Udai Singh-II and Queen Jaiwanta Bai, born in 1540 and died at the age of 56 in 1597.

● Pratap He was the 13th Rajput king of Mewar in Rajasthan area and was known for his bravery in the Battle of Haldighati.

● The battle was fought in 1576 between Maharana Pratap and Raja Man Singh of Amber, who was the general of Mughal Emperor Akbar. The Mughals emerged victorious but failed to capture Pratap, who escaped.

● After 1579, the Mughal pressure on Mewar relaxed following rebellions in Bengal and Bihar. Taking advantage of the situation, Maharana regathered his forces and recovered Western Mewar including Kumbhalgarh, Udaipur and Gogunda. He also built a new capital, Chavand, near modern Dungarpur during this time.

Rabindranath Tagore

● Rabindranath Tagore’s birth anniversary was observed on May 7. Rabindranath Tagore was a renowned Bengali writer, poet, novelist, philosopher and painter, who played a crucial role in introducing Indian culture to the west.

● Tagore was born in Calcutta in 1861 and died on August 7, 1941, in Calcutta. He is also known by several names such as Gurudev, Kabiguru, Biswakabi and is also referred to as the “Bard of Bengal.”
Celebrated annually and globally on May 7 every year, Bengalis observe Rabindranath Tagore Jayanti on Pochishe Boishakh, the 25th day of the Bengali month of Boishakh.

Tagore began writing poetry at the tender age of eight years old and released his first collection of poems under the name Bhanusimha when he was 16.

He attended a number of sessions of the Indian National Congress in Calcutta where he composed songs and sang during India’s freedom struggle. He wrote India’s national anthem, Jana Gana Mana. He also wrote Amar Sonar Bangla, the national anthem for Bangladesh.

He was the first non-European to win the Nobel Prize in Literature in 1913 for his work on Gitanjali.

Tagore was awarded knighthood by the British King George V in 1915. However, he renounced his Knighthood in 1919 following the Jallianwalla Bagh massacre.

Toda Embroidery

The Toda Embroidery, also locally known as “pukhoor”, is an artwork made exclusively by the women of the Toda tribe of Nilgiris, Tamil Nadu.

The Todas, also known by names such as Tudas, Tudavans, and Todar, are pastoral people in the Nilgiri Hills in the higher elevations of the Nilgiri plateau, in Tamil Nadu.

The embroidery has a fine finish, appears like a woven cloth but is made with use of red and black threads with a white cotton cloth background.

This handicraft product got a geographical indication tag.

Gandhi Peace Prize

The Gandhi Peace Prize is an international award given annually by the Government of India for social, economic and political transformation through non-violence and other Gandhian methods.

It was instituted by the Government of India in 1995 to commemorate the 125th anniversary celebration of Mahatma Gandhi.

The Award comprises an amount of Rs. 1 Crore and a Citation. The Award may be divided between two persons / institutions who are considered by the Jury to be equally deserving of recognition in a given year.

The Award is open to all persons regardless of nationality, race, language, caste, creed or gender.

Pearl Harbour Attack

Pearl Harbor attack was a surprise aerial attack on the U.S. naval base at Pearl Harbor on Oahu Island, Hawaii, on December 7, 1941 by the Japanese forces.

In May 1940, the United States had made Pearl Harbor the main base for its Pacific Fleet.

Reasons for Pearl Harbour attack:

○ The island nation of Japan embarked on a period of aggressive expansion near the turn of the 20th century. Two successful wars, against China in 1894-95 and the Russo-Japanese War in 1904-05, fueled these ambitions, as did Japan’s successful participation in World War I (1914-18) alongside the Allies.

○ The strike climaxed a decade of worsening relations between the United States and Japan.
During the Great Depression of the 1930s, Japan sought to solve its economic and demographic woes by forcing its way into China, starting in 1931 with an invasion of Manchuria. When a commission appointed by the League of Nations condemned the invasion, Japan withdrew from the international organization; it would occupy Manchuria until 1945.

In light of such atrocities, the United States began passing economic sanctions against Japan. Tokyo and Washington negotiated for months leading up to the Pearl Harbor attack.

Japan’s surprise attack on Pearl Harbor drove the United States out of isolation and into World War II, a conflict that would end with Japan’s surrender after the devastating nuclear bombing of Hiroshima and Nagasaki in August 1945.

**Archaeological Survey of India**
- The Archaeological Survey of India (ASI), under the Ministry of Culture, is the premier organization for the archaeological research and protection of the cultural heritage of the nation.
- It was founded in 1861 by Alexander Cunningham who also became its first Director-General.
- The primary focus of ASI is the maintenance of ancient monuments and archaeological sites and remains of national importance.
- It also regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains Act, 1958. It also regulates Antiquities and Art Treasure Act, 1972.

**International Museum Day**
- Each year since 1977, International Museum Day is observed annually on May 18th by the International Council of Museums (ICOM).
- The objective of International Museum Day (IMD) is to raise awareness about the cultural importance of museums.
- The theme for International Museum Day 2020: “Museums for Equality: Diversity and Inclusion”.
- The International Council of Museums (ICOM) is a non-governmental organisation created in 1946.
- It maintains formal relations with UNESCO and has consultative status with the United Nations Economic and Social Council.

**Katkari Tribe**
- The Katkari is a scheduled tribe mostly belonging to the state of Maharashtra.
- They are bilingual, speaking the Katkari language, a dialect of the Marathi-Konkani languages, with each other and speaking Marathi.
- In Maharashtra the Katkari have been designated a Particularly Vulnerable Tribal Group (PVTG), along with two other groups included in this sub-category: the Madia Gond and the Kolam.
- The Katkari population engage in a wide range of livelihoods including the production and sale of catechu, charcoal, firewood and other forest products, freshwater fishing, hunting of small mammals and birds, upland agriculture and agricultural labour on the farms of both tribal and nontribal farmers.
- Criteria for Particularly Vulnerable Tribal Group (PVTG):
  - Pre-agricultural level of technology,
○ Low level of literacy,
○ Economic backwardness,
○ A declining or stagnant population.
● In the case of the Katkari this vulnerability derives from their **history as a nomadic, forest-dwelling people** listed by the British Raj under the **Criminal Tribes Act of 1871**, a stigma that continues to this day.

**Purandara Dasa**
● Purandara Dasa (1484 – 1565) was a **Haridasa**, a renowned composer of Carnatic music, a great devotee of Lord Krishna, a Vaishnava poet, a saint and a social reformer.
● He was a **disciple of the Dvaita philosopher-saint Vyasatirtha**, and a **contemporary of yet another Haridasa, Kanakadasa**.
● Purandaradasa blended the rich musical streams, namely the **Dravidian** and **Aryan music**, into a single stream known as **Carnatic music**.
● In honor of his significant contributions to Carnatic music, he is widely referred to as the **father of Carnatic music**. He is also respected as an **Avatara (incarnation) of the great sage Narada** (a celestial being who is also a singer).
● Purandara Dasa is noted for **composing Dasa Sahithya**, as a Bhakti movement vocalist, and a music scholar.
● The Department of Archaeology, Heritage and Museums will soon commence field research work at Keshavapura in Araga Gram Panchayat (GP), Karnataka to **explore definitive archaeological evidence** that may put an end to speculations **regarding the birthplace of Purandara Dasa**.

**Chardham Pariyojna**
● It is an initiative of the **Ministry of Road Transport and Highways** and these projects are being implemented by **three executing agencies of the ministry**:
  ○ Uttarakhand State PWD
  ○ Border Road Organization(BRO)
  ○ National Highway & Infrastructure Development Corporation Limited (NHIDCL)
● The project, estimated to be costing around Rs 12,000 crore, aims to develop and widen 900 km of national highways connecting the holy Hindu pilgrimage sites of **Badrinath, Kedarnath, Gangotri, and Yamunotri**.
● Under this Project, BRO is constructing 250 Km of National Highways leading to holy shrine Gangotri and Badrinath.
● The works under Char Dham Pariyojna are being implemented on **Engineering Procurement and Construction (EPC) mode of contract**.
● The highway will be called **Char Dham Mahamarg (Char Dham Highway)** and the highway construction project will be called **Char Dham Mahamarg Vikas Pariyojana (Char Dham Highway Development Project)**.
Gopal Krishna Gokhale

- Gopal Krishna Gokhale (9 May 1866 – 19 February 1915) was an Indian liberal political leader and a social reformer during the Indian Independence Movement.
- Gokhale became a member of the Indian National Congress in 1889, as a protege of social reformer Mahadev Govind Ranade.
- He founded Servants of India Society in 1905 to promote education, sanitation, health care and fight the social evils of untouchability and discrimination, alcoholism, poverty, oppression of women and domestic abuse.
- He was moderate in his views and attitudes, and sought to petition the British authorities by cultivating a process of dialogue and discussion which would yield greater British respect for Indian rights.
- Gokhale was famously a mentor to Mahatma Gandhi in the latter’s formative years. In 1912, Gokhale visited South Africa at Gandhi’s invitation.
- He started the English weekly newspaper, The Hitavad (The people’s paper) and also published a daily newspaper titled Jnanaprakash.
- In 1899, Gokhale was elected to the Bombay Legislative Council. He was also elected to the Imperial Council of the Governor-General of India as a non-officiating member representing Bombay Province.

Veer Savarkar

- Vinayak Damodar Savarkar, more commonly known as Veer Savarkar, was born on May 28 in 1883.
- He was an Indian independence activist, politician, lawyer, writer, and the formulator of Hindutva philosophy.
- In Pune, Savarkar founded the “Abhinav Bharat Society”.
- During his stay in London, he wrote “The History of the War of Indian Independence”, which was banned across the British Empire.
- He was arrested on charges of plotting an armed revolt against the Morley-Minto Reform of the British Empire in 1909.
- Savarkar in his important work Hindutva: Who is a Hindu? Developed the core of his philosophy on the concept of Hindutva.
- Veer Savarkar also founded the two-nation theory in his book ‘Hindutva’ calling Hindus and Muslims two separate nations. In 1937, Hindu Mahasabha passed it as a resolution. In 1937, he also became the president of ‘Hindu Mahasabha’.

Hanko

- The hanko is a personal stamp that is equivalent to a signature in other countries, and is an essential part of several transactions. Small-sized and circular or square-shaped, the stamp is wet by an ink pad called ‘shuniku’, and the mark that it leaves on a document is called ‘inkan’.
- The use of the traditional seal can be traced back to almost two millennia, when an emperor from China’s Han dynasty gave a solid gold stamp to an envoy from Japan in the year 57 AD.
- Since then, for many centuries, only important places of work such as government departments and temples used these stamps. It was only during the Meiji era of the late 19th century that a law was
passed to create a national certification and registration system, and the use of hanko became widespread.

- Even today, when many countries have seen a push towards paperless systems and adopting digital signatures, the **hanko remains popular in Japan.**

**Ramkinkar Baij**

- Born in Bankura in West Bengal in 1910, Ramkinkar Baij was an **Indian painter**, one of the pioneers of modern Indian sculpture and a key figure of Contextual Modernism.
- Baij was inspired by real life figures, and his drawings, sculptures and paintings reflected his bold realism and spontaneity as seen particularly in his sequence of watercolour nudes.
- He **integrated elements of Santhal tribal art and life into his own work** and enhanced them by an understanding of Western expressionism that was gleaned from books at the library of the Kala Bhavan.
- In 1970, the Government of India honoured him with the Padma Bhushan. In 1976 he was made a Fellow of the Lalit Kala Akademi.

**Madhubani Paintings**

- Madhubani painting is a **traditional Indian painting** belonging to **Mithila region** in the areas of Indo-Nepal border across Bihar. Madhubani means “forests of honey”.
- Madhubani painting, also referred to as **Mithila Art**, is characterized by **line drawings** filled in by **bright colours and contrasts or patterns**.
- These paintings are popular because of their **tribal motifs and use of bright earthy colours**. The paintings are done on freshly plastered or a mud wall with **mineral pigments** prepared by the artists.
- Figures from **nature & mythology** are adapted to suit their style. The **themes & designs** widely painted are of **Hindu deities** such as Krishna, Rama, Siva, Durga, Lakshmi, Saraswati, Sun and Moon, Tulasi plant, court scenes, wedding scenes, social happenings etc. **Floral, animal and bird motifs, geometrical designs** are used to fill up all the gaps.
- It has been granted the **Geographical Indication (GI) tag**.

**Bal Gangadhar Tilak**

- The Prime Minister paid tribute to **Bal Gangadhar Tilak** on his birth anniversary. He was born on **23rd July 1856** in Ratnagiri, **Maharashtra**.
- Tilak was a scholar, mathematician, philosopher, and ardent nationalist who helped lay the foundation for India’s independence.
- He was one of the first and strongest proponents of **“Swaraj” (Self-rule)**. He gave the slogan **“Swaraj is my birthright and I shall have it”**.
- He **joined the Indian National Congress (INC)** in **1890** and was part of the **Lal-Bal-Pal trio** along with Lala Lajpat Rai and Bipin Chandra Pal.
- Tilak became widely known for his **bitter criticisms of British rule and of those moderate nationalists** who advocated social reforms along Western lines and political reforms along constitutional lines.
● Tilak’s activities aroused the Indian populace, but they soon also brought him into conflict with the British government, which prosecuted him for sedition and sent him to jail in 1897. The trial and sentence earned him the title ‘Lokmanya Tilak’.

● He founded the All India Home Rule League in April 1916 at Belgaum. The league worked in Maharashtra (except Bombay), the Central Provinces, Karnataka and Berar.

● Tilak re-joined the Indian National Congress in 1916 after the Surat Split in 1907. In 1916, he concluded the Lucknow Pact with Mohammed Ali Jinnah, which provided for Hindu-Muslim unity in the nationalist struggle.

● He founded Deccan Education Society in 1884 which aimed at educating the masses, especially in the English language for the dissemination of liberal and democratic ideals.

● He also founded Fergusson College (1885) in Pune along with others through the Deccan Education Society.

● He owned and edited: Kesari (“The Lion”), published in Marathi, and The Mahratta, published in English.

● Books: Gita Rahasya (Secret of the Bhagavad Gita), The Arctic Home in the Vedas

● He died on 1st August 1920. This year marks the 100th death anniversary of Lokmanya Tilak.

Chandra Shekhar Azad

● Chandra Shekhar Azad was born on 23rd July 1906 in the Alirajpur district of Madhya Pradesh.

● Azad was drawn into the Indian national movement at a young age of 15 when apprehended by the police while participating in the Non-Cooperation Movement (1920–22) at Varanasi.

● When produced by the magistrate, he announced his name as ‘Azad’, his father’s name as ‘Swatantrata’ and his address as ‘Jail’.

● After the suspension of the Non-Cooperation movement in 1922 by Gandhi, Azad joined Hindustan Republican Association (HRA).

● He played a key role in reorganizing the HRA as the Hindustan Socialist Republican Association (HSRA) in 1928.

● Azad was involved in the 1925 Kakori Conspiracy.

● He died on 27th February 1931 at Azad Park in Allahabad.

Natesa & Pratihara Architecture

● Natesa, a rare sandstone idol in the 9th century Pratihara style of Rajasthan, will be returned to India after 22 years, having been stolen in 1998. The Natesa icon, currently at the Indian High Commission, London, was originally from the Ghateswara Temple, Baroli, Rajasthan.

● The sandstone Natesa figure stands tall at almost 4 ft. in a rare and brilliant depiction of Shiva. A beautiful depiction of Nandi is shown behind the right leg of the Natesa icon.

● Pratihara style of temple architecture belongs to the Gurjara-Pratihara dynasty of Rajasthan. Gurjara-Pratihara are known for their sculptures, carved panels and open pavilion style temples.

● One of the most notable Gurjara-Pratihara styles of architecture was Khajuraho, now a UNESCO World Heritage Site.

● The Gurjara-Pratiharas, also known as the Pratihara Empire, ruled much of Northern India from the mid-7th to the 11th century.
The dynasty rose in prominence by gaining a reputation for repelling the Arab Islamic invasions. In the famous Battle of Rajasthan (738 C.E.), Nagabhata I defeated the Arab army.

**Subhash Chandra Bose Aapda Prabandhan Puraskar**

- The Government of India has invited nominations for the “Subhash Chandra Bose Aapda Prabandhan Puraskar” for excellence in the field of Disaster Management.
- These awards are announced on the birth anniversary of Netaji Subhash Chandra Bose on 23rd January every year.
- The Government of India instituted this award to recognize the excellent work done by individuals and institutions in India in the field of Disaster Management.
- In addition to a certificate, these awards carry a cash award of Rs 51 lakhs for an Institution and Rs 5 lakhs for an Individual.
- An individual can apply for the award as well as nominate another person or institution. The nominated individual or institution should have worked in any area of disaster management like Prevention, Mitigation, Preparedness, Rescue, Response, Relief, Rehabilitation, Research, Innovation or early warning in India.
- Only Indian nationals and Indian institutions can apply for the award.
- For institutional awards, voluntary organizations, corporate entities, academic/research institutions, response/ uniformed forces or any other institution may apply for the award.

**Jyotirao Phule**

- The Maharashtra government has claimed it has waived off loans of 83% out of total eligible farmers under the Mahatma Jyotirao Phule crop loan waiver scheme amounting to ₹17,646 crore.
- The scheme was announced in December 2019, to write off crop loans up to Rs 2 lakh (taken between April 1, 2015, and March 31, 2019) which has not been repaid till September 30, 2019.
- Jyotirao Phule was born on 11 April 1827 in Katgun, Satara District in Maharashtra.
- Jyotirao ‘Jyotiba’ Govindrao Phule was a prominent social reformer and thinker of the nineteenth century India.
- His work included eradication of untouchability and caste system, emancipation and empowerment of women, reform of Hindu family life. As a staunch opponent of the caste system, Phule attacked the Vedas and the role of Brahmins in society.
- He along with his wife, Savitribai Phule, is regarded as pioneers of women’s education in India. They started a school for girls in Pune in 1848, which was the first such school by Indians.
- Mahatma Phule founded the Satyashodhak Samaj in 1873 to oppose caste system, idolatry and denounce the need for priests. He also championed the necessity of rational thinking.
- He was given the title of Mahatma by a Maharashtrian social activist, Vithalrao Krishnaji Vandekar.
- His published works included: Tritiya Ratna, Brahmananche Kasab, Gulamgiri, Satyashodhak Samajokt Mangalashtakasah Sarva Puja-vidhi, Sarvajanic Satya Dharmapustak, Shetkaryacha Asud.
Gandhi-King Scholarly Exchange Initiative Act

- The Gandhi-King Exchange Act was passed by the House Foreign Affairs Committee in the U.S. House of Representatives. The bill would establish an exchange initiative between the United States and India to study the work and legacies of Mahatma Gandhi and Martin Luther King Jr.
- The Act authorises the US State Department, in cooperation with the Indian government, to establish an annual educational forum for scholars from both countries that focuses on the legacies of two leaders.
- The bill also seeks to establish the Gandhi-King Global Academy, a conflict resolution initiative based on the principles of nonviolence and establish a foundation to address social, environmental, and health priorities in India.
- The Foundation, which has a proposed budget authorized of up to $30 million per year for five years through 2025 is tasked with administering grants to NGOs that work in health, pollution and climate change, education and empowerment of women.

Abanindranath Tagore

- The National Gallery of Modern Art (NGMA), New Delhi organised the virtual tour titled “The Great Maestro | Abanindranath Tagore” to commemorate the 150th birth anniversary of Abanindranath Tagore on 7th August 2020.
- Abanindranath Tagore, the nephew of Rabindranath Tagore, was born in 1871 in the Jorasanko town of Bengal.
- He was one of the most prominent artists of India and was the first major supporter of swadeshi values in Indian art.
- Abanindranath first created the ‘Indian Society of Oriental Art’ and later went on to establish Bengal school of art.
- He painted a range of subjects. He had a leaning towards painting images with historic or literary allusions. He liked to paint sets of images dealing with a theme or a text such as the 'Arabian Nights' or the 'Krishna Leela'. He also enjoyed painting theatrical subjects.
- He sought to modernize Mughal and Rajput styles in order to counter the influence of Western models of art, as taught in Art Schools under the British Raj and developed an Indian style of painting, later known as Bengal school of art.
- Famous Paintings: Ganesh Janani, Bharat Mata, The Victory of Buddha, The Passing of Shah Jahan, Journey's End, etc.
- He was an elegant and accomplished writer. Most of his literary works were meant for children. Some of his books like ‘BudoAngla’, ‘KhirerPutui’ and ‘Rajkahini’ are best examples of Bengali children's literature.

Quit India Movement

- 78th anniversary of the Quit India Movement was observed on 8th August, 2020.
- The Quit India Movement, also known as the ‘India August Movement’, was a nation-wide movement launched at the Bombay session of the All-India Congress Committee by Mahatma Gandhi on 8th August 1942.
- Factors leading to the movement:
While factors leading to such a movement had been building up, the immediate cause was the failure of the Cripps Mission.

In March 1942, a mission led by Sir Stafford Cripps arrived in India to meet leaders of the Congress and the Muslim League. The idea was to secure India’s whole-hearted support in World War II, in return for self-governance.

However, despite the promise of the earliest possible realisation of self-government in India, the offer Cripps made was of dominion status, and not freedom. Also, there was a provision of the partition of India, which was not acceptable to the Congress.

The failure of the Cripps Mission made Mahatma Gandhi give the call of “Do or Die”. At the Working Committee meeting in Wardha in July 1942, it was decided the time had come for the movement to move into an active phase.

The slogan was coined by Yusuf Meherally, a socialist and trade unionist who also served as Mayor of Mumbai. In 1928, it was Meherally who had coined the slogan “Simon Go Back”.

- Aruna Asaf Ali, popularly known as the ‘Grand Old Lady’ of the Independence Movement hoisted the Indian flag at the Gowalia Tank Maidan in Mumbai during the Quit India Movement.

**Quit India Resolution:**

- The Quit India Resolution was ratified at the Congress meeting at Gowalia Tank, Bombay, on August 8, 1942. Gandhi was named the leader of the struggle.

- The meeting also resolved to:
  - demand an immediate end to British rule in India
  - declare commitment of free India to defend itself against all types of Fascism and imperialism
  - form a provisional Government of India after British withdrawal
  - sanction a civil disobedience movement against British rule

**People’s movement**

- By August 9, Gandhi and all other senior Congress leaders had been jailed. The arrest of the leaders, however, failed to deter the masses. With no one to give directions, people took the movement into their own hands.

- In Bombay, Poona and Ahmedabad, lakhs of people clashed with the police on August 9. On August 10, protests erupted in Delhi, UP and Bihar. There were strikes, demonstrations and people’s marches in defiance of prohibitory orders in Kanpur, Patna, Varanasi, and Allahabad.

- The protests spread rapidly into smaller towns and villages. Till mid-September, police stations, courts, post offices and other symbols of government authority were attacked. Railway tracks were blocked, students went on strike in schools and colleges across India.

- In some places, the protests were violent, with bridges blown up, telegraph wires cut, and railway lines taken apart.

**Outcome:**

- The Quit India movement was violently suppressed by the British – people were shot, lathi-charged, villages burnt and enormous fines imposed.

- In the five months up to December 1942, an estimated 60,000 people had been thrown in jail.

- However, the movement changed the character of the Indian freedom struggle, with the masses rising up to the British, leading to India’s independence.
National Flag of India

- India celebrated its 74th Independence Day with the Prime Minister hoisting the National Flag at Red Fort, New Delhi.
- Arguably the first national flag of India is said to have been hoisted on August 7, 1906, in Kolkata at the Parsee Bagan Square (Green Park). It was reportedly designed by Sister Nivedita, an Irish disciple of Swami Vivekananda.
  - It comprised three horizontal strips of red, yellow and green, with Vande Mataram written in the middle.
  - The red strip on the flag had symbols of the sun and a crescent moon, and the green strip had eight half-open lotuses.
- In 1907, Madame Cama and her group of exiled revolutionaries hoisted an Indian flag in Germany. This was the first Indian flag to be hoisted in a foreign land.
- In 1917, Dr Annie Besant and Lokmanya Tilak adopted a new flag as part of the Home Rule Movement.
  - It had five alternate red and four green horizontal stripes, and seven stars in the saptarishi configuration.
  - A white crescent and star occupied one top corner, and the other had Union Jack.
- The design of the present-day Indian flag is largely attributed to Pingali Venkayya, an Indian freedom fighter who reportedly first met Mahatma Gandhi in South Africa during the second Anglo-Boer War (1899-1902).
- At the All India Congress Committee in Bezwada in 1921, Venkayya proposed a basic design of the flag, consisting of two red and green bands to symbolise the two major communities, Hindus and Muslims. Gandhi arguably suggested adding a white band to represent peace and the rest of the communities living in India, and a spinning wheel to symbolise the progress of the country.
- In 1931, the Congress Committee met in Karachi and adopted the tricolour as the national flag. Red was replaced with saffron and the order of the colours was changed. The flag was to have no religious interpretation.
  - Saffron on top symbolises “strength and courage”, white in the middle represents “peace and truth” and green at the bottom stands for “fertility, growth and auspiciousness of the land”.
  - The Ashok Chakra with 24 spokes replaced the spinning wheel as the emblem on the flag. It is intended “to show that there is life in movement and death in stagnation”.

Pingali Venkayya

- Pingali Venkayya was a freedom fighter, born on August 2, 1876 in Krishna district of Andhra Pradesh, who went on to become synonymous with the spirit of free and independent India.
- Venkayya served as a soldier in the British Army in South Africa during the Anglo Boer war in Africa.
- Venkayya, who passed away in 1963, was posthumously honoured with a postage stamp in 2009 for his contribution towards Indian freedom struggle.
- In 2014, his name was also proposed for the Bharat Ratna.
U.K. to Issue Coin to Honour Gandhiji

- Britain is considering minting a coin to commemorate Mahatma Gandhi, amid growing interest in recognising the contributions of people from the Black, Asian and other minority ethnic communities.
- Many organisations have taken initiatives to make investments to help the Black, Asian and minority ethnic (BAME) communities and to support racial diversity.

Nagara Architecture of Ayodhya’s Ram Mandir

- The grand Ram Mandir, coming up at the Ram Janmabhoomi in Ayodhya, will be constructed in 'nagara' style of temple architecture.
- Spread over an area of more than 84,000 square feet, the proposed Ram Temple at Ayodhya would be a unique example of Indian architecture.
- The temple would be 360 feet long and 235 feet wide and would have three floors.
- The chief architect of the temple is Chandrakant Sompura.
- The temple would have an octagonal 'shikhar' (top) with five 'mandaps' (halls). There would be separate 'mandaps' for 'keertans' (religious songs) and prayer.
- There would be 106 pillars of eight feet radius on every floor. The pillars would have the idols of 'yakhas' (the servants of Kuber, the God of wealth).
- Ram Lalla (the child Lord Rama) would be seated on a throne made with 9.5 kilograms of silver. The temple would consume three lakh cubic feet of sandstones.
- The temple would also have a library, accommodation for the saints, a hostel and a museum. Sompura said that the temple would be completed in three years.

Nagara style of temple architecture

- The Nagara style of temple architecture is found in northern India. Nagara school is further subdivided into different schools based on regions like Odisha, Khajuraho, Solanki etc.
- In the Nagara style, the temple is generally constructed on an upraised platform called jagati. Mandapas are present in front of the Garbhagriha. These are adorned with the Shikhara, the tallest one being above the Garbhagriha.
- The shikhara over the mandapas in the pictures of the Ayodhya Ram temple can be seen having a square base, and a rectilinear outline.
This is called the phamsana-style shikhara. The mandapa shikhara right at the entrance has an octagonal base.

The basic form of a Hindu temple contains the following architectural elements:

- **Garbhagriha** - the small room where the principle deity/deities of the temple reside.
- **Mandapa** - the portico or hall at the entrance of the temple generally designed to house a large number of people.
- **Shikhara** - the mountain like spire which can have different shapes from pyramidal to curvilinear.
- **Vahana** - the mount of the main deity placed generally in line of sight from Garbhagriha.

**Thenzawl Golf Resort**

- GOI inaugurates world class “Thenzawl Golf Resort” project implemented in Mizoram under the Swadesh Darshan Scheme of the Ministry of Tourism.
- The Project was sanctioned under the Integrated Development of New Eco Tourism under Swadesh Darshan- North East Circuit.

**Swadesh Darshan Scheme**

- It is a scheme of the Ministry of Tourism.
- The scheme aims to promote, develop and harness the potential of tourism in India.
- This is a central sector scheme; i.e. - 100% funded by the Central Government of India. The funding available for Corporate Social Responsibility (CSR) initiatives of Central Public Sector Undertakings and Corporate Sector is also used in this scheme.
- The entire scheme is based on theme-based tourism. Each theme is called a "circuit" and composed of various tourist destinations. Currently, there are 15 theme-based circuits across India.

**Museums for Tribal Freedom Fighters**

- Government has decided to set up Museums to commemorate the contribution of Tribals in the freedom struggle.
- There will be nine in total and the largest to be built in Rajpipla in Gujarat. The rest of the museums are built in Ranchi (Jharkhand), Raipur (Chhattisgarh), Lambasingi (Andhra Pradesh), Kozhikode (Kerala), Hyderabad (Telangana), Chhindwara (Madhya Pradesh), Senapati (Manipur) and Kelsi (Mizoram).
PM SVANidhi

- A special Micro-Credit Facility Scheme, **PM Street Vendor’s AtmaNirbharNidhi (PM SVANidhi)**, has been launched by the **Ministry of Housing and Urban Affairs** for providing affordable loans to street vendors.
- This scheme will go a long way in enabling them to resume work and earn livelihoods.
- **Beneficiary:** Vendors, hawkers, thelewalas, rehriwala, theliphadwala etc. selling different goods and services in different areas/ contexts.
- **Features:**
  - The vendors can **avail a working capital loan of up to Rs. 10,000**, which is repayable in monthly instalments in the **tenure of one year**.
  - On timely/ early repayment of the loan, an interest subsidy @ 7% per annum will be credited to the bank accounts of beneficiaries through Direct Benefit Transfer on six monthly basis. There will be **no penalty on early repayment of loan**.
  - The scheme provides for **escalation of the credit limit** on timely/ early repayment of loans to help the vendor achieve his ambition of going up on the economic ladder.
  - It is for the first time that **MFIs/ NBFCs/ SHG Banks have been allowed** in a scheme for the urban poor due to their ground level presence and proximity to the urban poor including the street vendors.
  - To ensure effective delivery and transparency, a digital platform with web portal/ mobile app is being developed to administer the scheme with end-to-end solution. The IT platform will also help in integrating the vendors into the formal financial system. This platform will integrate the web portal/ mobile app with **UdyamiMitra portal of SIDBI** for credit management and **PAiSA portal of MoHUA** to administer interest subsidy automatically.
- The scheme **incentivises digital transactions** by the street vendors through monthly cash back.

SWADES

- The Government of India has launched a new initiative **SWADES (Skilled Workers Arrival Database for Employment Support)** to conduct a **skill mapping exercise** of the returning citizens under the Vande Bharat Mission.
- This is a joint initiative of the **Ministry of Skill Development & Entrepreneurship**, the **Ministry of Civil Aviation** and the **Ministry of External Affairs** which aims to create a database of qualified citizens based on their skill sets and experience to tap into and fulfil demand of Indian and foreign companies.
- The returning citizens are required to fill up an **online SWADES Skills Card**. The card will facilitate a strategic framework to provide the returning citizens with suitable employment opportunities through discussions with key stakeholders including State Governments, Industry Associations and Employers.
- **National Skill Development Corporation (NSDC)** is supporting the implementation of the project.
Sahakar Mitra

- **Sahakar Mitra: Scheme on Internship Programme (SIP)** was launched by the **Union Minister for Agriculture & Farmers’ Welfare** emphasizing the importance of local for vocal.
- It is an initiative of the **National Cooperative Development Corporation (NCDC)** to provide the young professionals an opportunity of practical exposure and learning from the working of NCDC and cooperatives as a paid intern.
- Sahakar Mitra would also provide an opportunity to professionals from academic institutions to develop leadership and entrepreneurial roles through cooperatives as Farmers Producers Organizations (FPO).
- Under the scheme, professional graduates in disciplines such as **Agriculture and allied areas, IT etc.** will be eligible for internship. Professionals who are pursuing or have completed their MBA degrees in Agri-business, Cooperation, Finance, International Trade, Forestry, Rural Development, Project Management etc. will also be eligible.
- **NCDC has earmarked funds** for Sahakar Mitra paid internship program under which each intern will get financial support over a 4 months internship period.

**The National Cooperative Development Corporation**

- It is a **statutory Corporation** set up under an Act of Indian Parliament on 13 March **1963** under the **Ministry of Agriculture & Farmers Welfare**.
- **Functions:** Planning, promoting and financing programmes for production, processing, marketing, storage, export and import of agricultural produce, food stuffs, certain other notified commodities.

**World Day Against Child Labour**

- This year, the World Day is conducted as a virtual campaign and is being organized jointly with the Global March Against Child Labour and the International Partnership for Cooperation on Child Labour in Agriculture (IPCCLA)
- **Findings:** The crisis can push millions of vulnerable children into child labour. Already, there are an estimated 152 million children in child labour, 72 million of which are in hazardous work.
- **Target 8.7** of the UN Sustainable Development Goals calls for an **end to child labour** in all its forms by **2025**.

**Garib Kalyan Rojgar Abhiyan**

- The Government of India launched a massive **rural public works scheme 'Garib Kalyan Rojgar Abhiyaan'** to empower and provide livelihood opportunities to the returnee **migrant workers** and rural citizens.
- It will run for 125 days, for 116 districts in the six States namely Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand, and Odisha and nearly 25 schemes of the government will be brought together under the 'Garib Kalyan Rojgar Abhiyan'
- It aims to provide employment to the **migrant workers** on one hand and create infrastructure in the rural regions of the country on the other hand.
- It will be implemented through the **Common Service Centres and Krishi Vigyan Kendras**.

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Global Trends Report

The United Nations High Commissioner for Refugees (UNHCR) released its annual Global Trends report to count and track the numbers of refugees, internally displaced people, and other disadvantaged people.

Findings

- Mainly 5 countries: Syria, Venezuela, Afghanistan, South Sudan and Myanmar account for two-thirds of people displaced across borders.
- Around 80 million people were displaced at the end of 2019. Main reasons behind the displacements were Conflict, Persecution, Violence, Human rights violations etc.
- Forced displacement has almost doubled since 2010.
- More than eight of every 10 refugees (85 per cent) are from developing countries compared to developed countries.

End Violence Partnership

- It aims to end all forms of violence against children by 2030.
- It is a public-private partnership that unites governments, United Nations agencies, civil society, faith groups, the private sector, philanthropic foundations, academics etc.
- It chartered progress in 155 countries against the “INSPIRE” framework, a set of seven strategies for preventing and responding to violence against children.

Animal Husbandry Infrastructure Development Fund

- Cabinet Committee on Economic Affairs, chaired by Prime Minister, has approved setting up of Animal Husbandry Infrastructure Development Fund (AHIDF) worth Rs. 15000 crores.
- The eligible beneficiaries under the Scheme would be Farmer Producer Organizations (FPOs), MSMEs, Section 8 Companies, Private Companies, and individual entrepreneur with minimum 10% margin money contribution by them.
- The balance 90% would be the loan component to be made available by scheduled banks.
- The Government of India will provide 3% interest subvention to eligible beneficiaries. There will be a 2 years moratorium period for principal loan amount and 6 years repayment period thereafter.
- Government of India would also set up a Credit Guarantee Fund of Rs. 750 crores to be managed by NABARD.

World Drug Report 2020

- Released by the United Nations Office of Drugs and Crimes (UNODC) on the occasion of International Day Against Drug Abuse and Illicit Trafficking (26 June, Theme 2020: Better Knowledge for Better Care).
- Findings: India is one of the major hubs of illicit drug trade for prescription drugs like tramadol, and designer drugs like methamphetamine.
- India comes in vulnerable regions in the world due to the Golden Crescent (Iran-Afghanistan-Pakistan) in the west and the Golden Triangle (South-East Asia) in the east.
Nasha Mukt Bharat: Annual Action Plan (2020-21)

- Launched by the Ministry of Social Justice and Empowerment on the occasion of “International Day Against Drug Abuse and Illicit Trafficking”.
- Launched for 272 Most Affected Districts’ from drug abuse with an aim to: Reach out to Children and Youth for awareness about the ill effect of drug use; Increase community participation and public cooperation; set up De-addiction centres.
- It provides financial assistance to NGOs across the country and 24x7 National Toll-Free drug de-addiction helpline number.
- Ministry has also prepared a National Action Plan for Drug Demand Reduction for the period 2018-2025 which aims at reduction of adverse consequences of drug use.
- Ministry of Social Justice and Empowerment is the nodal Ministry for drug demand reduction which coordinates and monitors all aspects of drug abuse prevention which include assessment of the extent of the problem, preventive action, treatment and rehabilitation of addicts, dissemination of information and public awareness.

State of World Population Report 2020

- Released by the United Nations Population Fund (UNFPA), the world organisation’s sexual and reproductive health agency
- Findings: India accounts for 45.8 million of the world’s 142.6 million “missing females” over the past 50 years
- Citing data by experts, it said that China and India together account for about 90-95 per cent of the estimated 1.2 million to 1.5 million missing female births annually worldwide due to gender-biased (prenatal) sex selection.
- This report identified 19 harmful practices against women out of which 3 are most widespread and persistent: son preference, child marriage and Female genital mutilation (FGM)

The Sample Registration System – Statistical Report

- Released by the Registrar General and Census Commissioner of India
- The Sample Registration System (SRS) is the largest demographic survey in the country mandated to provide annual estimates of fertility as well as mortality indicators at the state and national level. It became fully operational during 1969-70
- Findings: Infant mortality rate for the country has come down to 32 in 2018 from 40 in 2013, i.e an annual decline rate of about 1.6 point
- Despite this decline, one in every 31 infants at the national level one in every 28 infants in rural areas and one in every 43 infants in urban areas still die within one year of life
- Madhya Pradesh paints a worrisome picture with the highest IMR at 48 and Kerala has the lowest IMR of 7
- Sex ratio at birth (SRB) for the country has gone up by three points to 899 girls per 1000 boys in 2016-18(average) from 896 in 2015-17
- Chhattisgarh has the highest SRB (958) while Uttarakhand has the lowest 840.
- Total fertility rate (TFR) declined from 5.2 to 4.5 during 1971 to 1981 and from 3.6 to 2.2 during 1991 to 2018
Bihar has reported the highest TFR (3.2) while Delhi and West Bengal have reported the lowest TFR (1.5).

The Maternal Mortality ratio (MMR) has declined to 113 in 2016-18 from 122 in 2015-17 and 130 in 2014-16.

MMR of Assam (215) is the highest and lowest in Kerala (43).

The SDG target 3.1 of the United Nations aims to reduce the global maternal mortality ratio to less than 70 per 1,00,000 live births.

Disabled Are Entitled To Same Benefits Of SC/ST Quota

The Supreme Court, in a significant decision, confirmed that persons suffering from disabilities are also socially backward and entitled to the same benefits of relaxation as Scheduled Caste/Scheduled Tribe candidates in public employment and education.

The judgement upheld a 2012 judgment of the Delhi High Court in Anamol Bhandari (minor) through his father/Natural Guardian v. Delhi Technological University in a significant decision.

Constitutional Provisions for SCs and STs:

- **Article 15 (4)** - Empowers the State to make special provisions for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.
- **Article 16 (4A)** – Empowers the state to make provisions for reservation in matters of promotion to any class or classes of posts in the services under the State in favor of SC/STs which in the opinion of the State, are not adequately represented in the services under the State.
- **Article 46** – The State shall promote with special care the educational and economic interests of the weaker sections of the people and in particular of the Scheduled Castes and the Scheduled Tribes and shall protect them from social injustice and all forms of exploitation.

Extension of Pradhan Mantri Ujjwala Yojana (PMUY)

The earlier announced Pradhan Mantri Garib Kalyan Yojana (PMGKY) package included providing women of 83 million below poverty line (BPL) families with free cooking gas cylinders for three months under the Ujjwala scheme.

The petroleum ministry approved for time extension by three months up to September 2020 for the Ujjwala beneficiaries to avail the free cylinders.

Govt Notifies Draft Rules For Code On Wages

The Labour and Employment Ministry has notified the draft Code on Wages (Central) Rules under the Code on Wages, 2019, which would fix a national floor minimum wage based on minimum living standard including food, clothing, housing and any other factors prescribed by the government.

Centre has reduced normal working hours in a day to eight hours from nine proposed in the earlier version released last November.

Net intake of 2,700 calories per day, 66 meters cloth per year per standard working class family, housing rent expenditure as 10 percent of food and clothing expenditure, three adult consumption units are some of the factors that would determine the fixation of the national minimum wage.
The draft rules state that the Centre shall constitute a technical committee which would advise on the skill categories, while an advisory board may recommend the minimum wage.

**Start-up Village Entrepreneurship Programme (SVEP)**

- The SVEP is a sub-scheme under the Centre’s Deendayal Antyodaya Yojana-National Rural Livelihoods Mission to help the rural poor, including members of women SHGs and their families, set up enterprises at the village level in non-agricultural sectors.
- Kerala leads the ranking, followed by M.P. and Bihar.
- Uttarakhand, Mizoram, Manipur, and Assam have not established any enterprise under the scheme Deendayal Antyodaya Yojana-National Rural Livelihoods Mission

- This scheme was launched by the Ministry of Rural Development (MoRD) in 2011.
- It aims to increase household income through sustainable livelihood enhancements and improved access to financial services.
- It is aided by the World Bank.

**Agri-Infra Fund**

- Govt approved setting up an agri-infra fund of Rs 1 lakh cr. to provide financial support to entrepreneurs, start-ups, agri-tech players and farmer groups for infrastructure and logistics facilities.
- The Agri-Infra Fund was part of the Rs 20 lakh crore stimulus package announced in response to the COVID-19 disaster.
- Fund will be provided to primary agri credit societies, farmers groups, Farmer producer organisations (FPOs), agri-entrepreneurs, start-ups and agri-tech players. Loans will be disbursed in four years starting with sanction of Rs 10,000 crore in the current year and Rs 30,000 crore each in the next three financial years.

**Mukhyamantri Matru Pushti Uphaar**

- In an effort to combat infant and maternal mortality and malnutrition, Tripura government announced Mukhyamantri Matru Pushti Uphaar, an ambitious scheme to provide nutrition kits to pregnant and lactating women.
- The state scheme will be in addition to the Pradhan Mantri Matru Bandana Yojana.

**Indira Rasoi Yojana**

A new kitchen scheme, ‘Indira Rasoi Yojna (Indira Kitchen Scheme), named after former Prime Minister Indira Gandhi, launched in Rajasthan for providing nutritious food to the poor and needy twice a day on concessional rates.

**Mukhyamantri SHRAMIK (Shahri Rozgar Manjuri For Kamgar)**

- The Jharkhand government launched an employment guarantee scheme, Mukhyamantri SHRAMIK, for the urban unskilled workers to enhance livelihood security for the urban poor.
Jharkhand is the second state in the country to launch an employment guarantee scheme for the urban poor after Kerala. Kerala government runs Ayyankali Urban Employment Guarantee Scheme (AUEGS) for guaranteed employment.

- The scheme will be on similar lines of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- The scheme will ensure the 100 days of paid work for unskilled labour in urban areas. It will also provide an unemployment allowance to those who will not get work under the scheme within 15 days.

**Tribal Cooperative Marketing Development Federation of India (TRIFED)**

- TRIFED has collaborated with UNICEF for developing a digital communication strategy.
- This communication strategy is for promoting a digital campaign for Self Help Groups (SHGs) in order to ensure tribal gatherers carry on their work safely.
- The programme highlights the importance of social distancing.
- According to the plan, SHGs are to be promoted as Van Dhan Social Distancing Awareness cum Livelihood Centres.
- These Centres will educate the communities about social distancing, personal hygiene and also about adopting cashless practices.
- UNICEF will help TRIFED in creating Digital Multimedia Content, social media campaigns, Vanya Radio and webinars.

**GOAL (GOING ONLINE AS LEADERS)**

- The Union Minister for Tribal Affairs launched the “GOAL (Going Online As Leaders)” programme of the Ministry of Tribal Affairs (MoTA) in partnership with Facebook.
- It will develop Tribal Entrepreneurship and connect Tribal Youth to Domestic and International Markets through Digital Platforms.

**Godhan Nyay Yojana**

- It is launched by the Chhattisgarh government and under it the government will procure cow dung at Rs 2 per kilogram from livestock owners and use it to prepare organic fertilizers.
- It aims to give a boost to the rural economy and to create employment opportunities in rural areas.
- Implementation of Suraaji Gaon Yojana has already started in villages under which construction of more than 5,000 cowsheds has been constructed.

**Special Window for Affordable and Mid Income Housing (SWAMIH) Fund**

- It was formed in 2019 to complete construction of stalled, RERA-registered affordable and mid-income category housing projects which are stuck due to paucity of funds.
- cabinet approved a Rs.25,000 crore special window to provide funding to housing projects that are stuck with the aim of reviving the real estate sector.
- The Investment Manager of the Fund is SBICAP, a wholly-owned subsidiary of State Bank of India.
The sponsor of the Fund is the Secretary, Department of Economic Affairs, Ministry of Finance on behalf of the Government of India.

The approval, under the SWAMIH Investment Fund I, will enable the completion of nearly 60,000 homes across India.

These projects are spread across both large cities such as National Capital Region (NCR), Mumbai Metropolitan Region (MMR), Bengaluru, Chennai, Pune as well as Tier 2 locations including Karnal, Panipat, Lucknow, Surat, Dehradun, Kota, Nagpur, Jaipur, Nashik, Vizag, Chandigarh among others.

**Operation Muskaan**
It is a special drive being taken by the police to trace the missing children in Andhra Pradesh, reuniting many children who separated from their parents.

**Samarth Programme**
- The Samarth programme was launched in 2019 by Flipkart, e-commerce major and had partnered with five NGOs to bring India’s artisans, weavers and handicrafts producers onto its platform by providing support for onboarding, cataloguing, account management, dedicated seller support and warehousing support.
- Flipkart also supports MSMEs through Walmart Vriddhi, a supplier development programme that aims to empower 50,000 MSMEs.

**Women Entrepreneurship and Empowerment Initiative**
- This initiative has been founded by IIT Delhi and is being supported by the Department of Science and Technology (DST).
- This initiative aims at helping women ranging from college going students to middle-aged housewives to embrace entrepreneurship as a viable and fulfilling career option.

**Khadi Agarbatti Atma Nirbhar Mission**
- MSME ministry approved a unique employment generation program proposed by Khadi and Village Industries Commission (KVIC) to make India Aatmanirbhar in Agarbatti production.
- KVIC will provide a 25% subsidy on the cost of the machines and will recover the remaining 75% of the cost from the artisans in instalments every month.

**Parivar Pehchan Patra**
It is an 8-digit unique identification number meant for each family to enable smooth and automatic delivery of several citizen-centric services launched by the Haryana state government.

**Economically Weaker Sections (EWS) Quota**
- The Supreme Court referred petitions challenging the Constitution amendment introducing 10% quota in jobs and admissions for Economically Weaker Sections (EWS) to a five-judge bench.
- The petitions challenged the constitutional validity of The Constitution (One Hundred and Third Amendment) Act, 2019, by which a clause (6) was introduced in Articles 15 and 16.
Article 15 (6) empowers states to make special provision for advancement of any EWS other than those mentioned in clauses (4) and (5) and to make a special provision on their admission to educational institutions—including aided or unaided private ones—other than minority educational institutions referred to in Article 30 (1). This will be in addition to existing reservations and subject to a maximum of 10% of total seats in each category.

Article 16(6) empowers the state to make any provision for reservation of appointments or posts in favour of any EWS other than classes mentioned in clause (4), in addition to the existing reservation and subject to a maximum of 10% of posts in each category.

The petitioners contended that the amendments run contrary to the dictum in the majority judgment in the 1992 case Indra Sawhney & Ors. V. Union of India, that a backward class cannot be determined only and exclusively with reference to economic criterion. They also argued that reservation in unaided institutions violates the fundamental right under Article 19(1)(g) of the Constitution.

SC’s Verdict On Hindu Women’s Inheritance Rights

The Supreme Court ruled that a Hindu woman’s right to be a joint heir to the ancestral property is by birth and does not depend on whether her father was alive or not when the law was enacted in 2005.

The Hindu Succession (Amendment) Act, 2005 gave Hindu women the right to be coparceners or joint legal heirs in the same way a male heir does. However, questions were raised in multiple cases on whether the law applied retrospectively, and if the rights of women depended on the living status of the father through whom they would inherit.

Hindu Succession Act, 1956:

1. The Mitakshara school of Hindu law codified as the Hindu Succession Act, 1956 governed succession and inheritance of property but only recognised males as legal heirs.
2. The law applied to everyone who is not a Muslim, Christian, Parsi or Jew by religion. Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahmo Samaj are also considered Hindus for the purposes of this law.

Hindu Succession (Amendment) Act, 2005:

1. Women were recognised as coparceners or joint legal heirs for partition arising from 2005.
2. Section 6 of the Act was amended to make a daughter of a coparcener also a coparcener by birth “in her own right in the same manner as the son”.
3. The law also gave the daughter the same rights and liabilities “in the coparcenary property as she would have had if she had been a son”.
4. The law applies to ancestral property and to intestate succession in personal property — where succession happens as per law and not through a will.

Invalid Pension

1. The Central Government has decided to allow Invalid Pension to Armed Forces Personnel with less than 10 years of qualifying service.
2. Invalid pension is granted to the Armed Forces Personnel who is invalidated out of service on account of a disability which is accepted as Neither Attributable to Nor Aggravated (NANA) by Military Service.
The benefit of this decision will be available to those Armed Forces Personnel who were in service on or after 04.01.2019.

By this decision, Armed Forces Personnel whose service is less than ten years and became or become invalided out of service on account of any bodily or mental infirmity which is NANA by Military service and which permanently incapacitated or incapacitates them from military service as well as civil re-employment, will be benefited.

The Global Report on Food Crises 2020 (GRFC)

- It has been released by the Global Network Against Food Crises.
- This report has highlighted the threats of food crises due to COVID-19 in vulnerable countries.
- 135 million people in Crisis or worse in 2019 was the highest in the four years of the GRFC’s existence.
- Conflict/insecurity was still the main driver of food crises in 2019
- Africa had the largest numbers of acutely food-insecure people in need of assistance in countries badly affected by weather events, particularly in the Horn of Africa and Southern Africa, followed by Central America and Pakistan.

Global Network against Food Crises:

- It was jointly launched by the European Union, FAO and UN World Food Programme during the 2016 World Humanitarian Summit (WHS) to tackle protracted crises and recurrent disasters, reduce vulnerability, and manage risk, by bridging the divide between development and humanitarian partners.
- It works towards achieving a zero hunger goal, which is one of the Sustainable Development Agenda.

Achieving Zero Hunger By 2030 In Doubt, UN Report Warns

- The report was jointly produced by the Food and Agriculture Organization of the United Nations, the International Fund for Agriculture, the United Nations Children’s Fund, the UN World Food Programme and the World Health Organization.
- Achieving the Sustainable Development Goal of ‘Zero Hunger’ that it had mandated by 2030, will be very difficult, a United Nations report says.
- COVID-19 pandemic and the recession triggered by it will cause another 83 million people and possibly as many as 132 million, to go hungry in 2020.
- The greatest number of undernourished people were in Asia (381 million). Africa came second (250 million), followed by Latin America and the Caribbean (48 million).
- On the basis of current trends, by 2030, Africa would be home to more than half of the world’s chronically hungry.
- A healthy diet cost far more than $ 1.90 per day, the international poverty threshold, according to the report.
- Three billion people globally were unable to afford a healthy diet.
Global Multidimensional Poverty Index (MPI) 2020

- This index has been released jointly by the Oxford Poverty and Human Development Initiative (OPHI) and United Nations Development Programme.
- Theme of the report: “Charting pathways out of multidimensional poverty: Achieving the SDGs”.
- Three key parameters: health, education and standard of living, comprising 10 indicators.
- Findings: India had the biggest reduction in the number of multidimensional Poor people estimated at over 270 million during the 2005-15 period.
- About 84 % of multidimensionally poor people live in Sub-Saharan Africa and South Asia.

India Joins ‘Alliance for Poverty Eradication’ at UN as Founding Member

The alliance aims to focus on efforts to boost the global economy in the aftermath of the COVID-19 pandemic and to serve as a forum for Member States to raise awareness about the danger that poverty poses to world peace, human rights and sustainable development.

International Religious Freedom Alliance

- The U.S announced the launch of a 27-nation International Religious Freedom Alliance, which will try to adopt a collective approach in protecting and preserving religious freedom across the world.
- Among the prominent countries to join the alliance are Brazil, the United Kingdom, Israel, Ukraine, the Netherlands and Greece.

Draft Transgender Persons (Protection of Rights) Rules, 2020

- It has dropped medical examinations for trans persons applying for a certificate of identity to the district magistrate.
- Government or private organisation or establishment needs to take adequate steps to prohibit discrimination.
- All educational institutions shall have a committee that transgender persons can approach in case of any harassment or discrimination.
- State Government must set up a Transgender Protection Cell under the charge of the District Magistrate and Director General of Police to monitor cases of offences.
- States will be responsible for prosecution of individuals charged under Section 18 of the Transgender Persons (Protection of Rights) Act,2019 which proscribes offences against the transgender community and penalties. The offences would attract punishment of six months imprisonment or up to two years with a fine.

Draft Transgender Persons (Protection of Rights) Act,2019, Refer Quick Revision Part 1

TRIFED’s Virtual Office

- The Tribal Cooperative Marketing Development Federation of India (TRIFED) has launched its own Virtual office on its 33rd Foundation Day, August 6, 2020.
The TRIFED Virtual office network will help the team of TRIFED warriors work with their partners across the country on mission-mode towards bringing the tribal people closer to mainstream development.

An Employee Engagement and Work Distribution Matrix with Dashboard Links has also been launched to gauge the level of employee engagement and streamline their efforts.

These organizational initiatives are a part of TRIFED’s ambitious all-encompassing digitization drive to promote tribal commerce.

TRIFED

Registered under the then Multi-State Cooperative Societies Act 1984, TRIFED came into existence in 1987 as the national nodal agency under the aegis of Ministry of Tribal Affairs.

It works towards the socio-economic development of the tribal people from all states.

Initiatives:

TRIFED started the procurement and marketing of tribal art and craft items through its first retail outlet called TRIBES INDIA in 1999 to promote the economic welfare of their communities across India.

In its endeavour to promote tribal development, Trifed’s ‘Van Dhan Yojana’ seeks to shift tribal economy from supply of raw materials to value-added processing of these materials

The government has launched "Tech for Tribal" project aimed at transforming over 5 crore tribal entrepreneurs by organising tribal entrepreneurship and skill development programmes.
Global Education Monitoring Report 2020
● It is published by UNESCO.
● Theme: “Inclusion and education: All means all”.
● The 2020 Report assesses progress towards Sustainable Development Goal 4 (SDG 4) on education and its ten targets.
● The Report is motivated by the explicit reference to inclusion in the 2015 Incheon Declaration.
● The GEM Report launched a new online monitoring tool, Scoping Progress in Education, (SCOPE) telling the story behind SDG 4 data using the latest in online publishing and data-visualization technologies.
● A complementary new online platform, Profiles Enhancing Education Reviews, (PEER) prepared by the GEM Report has been launched describing countries’ laws and policies on inclusion and education.

Incheon Declaration
● It is a declaration on education adopted at the World Education Forum in Incheon, South Korea in 2015.
● It is the logical continuation of the Education For All (EFA) movement and the Millennium Development Goals on Education.

Digital Learning Platform “Skills Build Reignite
● Directorate General of Training (DGT), under the aegis of the Ministry of Skill Development & Entrepreneurship (MSDE)and IBM Partnership Unveils Free Digital Learning Platform “Skills Build Reignite”
● Created to address the current skills gap in the country (According to the India Skill Report (2019), only 45.6% of the youth graduating from educational institutions are employable. This reflects the massive shortage of skilled workforce in the country.)
● Also announces a ten-week duration Skills Build Innovation Camp for students, providing hands on project experience, enhanced learning, and increased employability
● SkillsBuild Innovation Camp- It is a 10-week program which supports 100 hours of structured learning to learners who are interested in gaining hands-on project experience to enhance learning and are intent on building their network and enhancing their employability.

Project ‘Strengthening Teaching-Learning and Results for States Program (STARS)
● The World Bank has announced an assistance of $500 million for the STARS project that aims to improve the quality and governance of school education in Six States- Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan.
● Around 25 crore students (between the age of 6 and 17) in 15 lakh schools and over 1 crore teachers will benefit from the programme.
**STARS** will also help **improve learning assessment systems**, strengthen classroom instruction and remediation, facilitate school-to-work transition, and strengthen governance and decentralised management.

The STARS programme builds on the long partnership between India and the World Bank *(since 1994)*, for strengthening public school education and to support the country’s goal of providing ‘Education for All’.

The project will focus directly on the delivery of education services at the **State, district, and sub-district levels**.

It will give special attention to students from **vulnerable sections** – with over 52 per cent (as a weighted average) of children in the government-run schools in the six project States.

**QS World University Rankings 2021 (Update)**

*For more details, refer Quick Revision Part 1.*

- The **Quacquarelli Symonds (QS) World University rankings** were released recently.
- The total number of **Indian institutions** in the top 1,000 global list has fallen from 24 to 21, despite the Centre’s flagship **Institutes of Eminence scheme**.
- The **Indian Institute of Technology (IIT) Bombay**, **Indian Institute of Science (IISc) Bangalore**, and **IIT Delhi** have featured in the top 200 list. However, all three have dropped in their rankings compared to the last year. Only the newer **IITs in Guwahati** and **Hyderabad** were able to show improvement.
- Indian institutions got zero scores on ratio of international faculty and students. India also scored poorly on faculty-student ratio. This is because India counts only full-time faculty, whereas American universities include even PhD students who are teaching or research assistants. However, Indian higher education institutions perform strongly in research quality.

**India Rankings 2020**

- “India Rankings 2020” for Higher Educational Institutions was recently released by the **Ministry of Human Resource & Development**.
- According to the **National Institutional Ranking Framework (NIRF)**, the **Indian Institute of Technology (IIT)-Madras** is the country’s best in the field of higher education. The **Indian Institute of Science (IISc), Bengaluru**, stands at the second place, followed by **IIT-Delhi**.
- Under the university’s category, the **IISc** topped the list, followed by Jawaharlal Nehru University and **Banaras Hindu University**.
- Dental institutions have been included for the first time in “India Rankings” bringing the total tally to 10 categories/subject domains.
- The National Institutional Ranking Framework (NIRF) was **launched in 2015** to rank higher educational institutions in the country based on objective criteria to **promote competitive excellence in the higher educational institutions**.

**Key Parameters:**
- Teaching, Learning and Resources (TLR)
- Research and Professional Practice (RP)
- Graduation Outcomes (GO)
- Outreach and Inclusivity (OI)
PRAGYATA Guidelines for Digital Education

- PRAGYATA guidelines for digital education have been released by the Ministry of Human Resource Development.
- These guidelines, prepared by the National Council of Educational Research and Training (NCERT), are only advisory in nature, and State governments have been asked to build on them and formulate their own rules, based on local needs.
- The PRAGYATA guidelines include eight steps of online/digital learning that is, Plan-Review-Arrange-Guide-Yak(talk)-Assign-Track-Accomplish.
- The Guidelines also emphasize the need to unify all efforts related to digital/online/on-air education, benefitting school-going children across the country. The initiative includes DIKSHA, SWAYAM Prabha, SWAYAM MOOCS, Radio Vahini, Shiksha Vaani, Special content for children with special needs, and ITPAL.
- Indian Institute of Technology (IIT) Madras launched World’s first-ever Online B.Sc. Degree in Programming and Data Science.

Play Little, Study Little Scheme

- The Tripura government started a scheme called ‘Ektu Khelo, Ektu Padho’ which means ‘Play little, Study little’, as uncertainty prevailing over reopening of schools due to COVID-19 pandemic.
- The students would be getting audio and video contents on learning activities, projects along with fun and gaming activities via SMS or WhatsApp services.

Education for Justice (E4J) Initiative

- The United Nations Office on Drugs and Crimes (UNODC) has launched a ‘Lockdown Learners’ series of online dialogues with students and educators in India on COVID-19 and its impact on Sustainable Development Goals, peace and rule of law.
- It has been launched by the United Nations body under its flagship Education for Justice Initiative.
- Aim - Sensitise students on concerns of vulnerable groups and emerging issues such as cybercrime, misinformation, gender-based violence, discrimination, corruption.

About United Nations Office on Drugs and Crime:

- UNODC is a United Nations office that was established in 1997 as the Office for Drug Control and Crime Prevention.
● It was established by combining the United Nations International Drug Control Program (UNDCP) and the Crime Prevention and Criminal Justice Division in the United Nations Office at Vienna.

● Headquarters - Vienna, Austria

● Parent organization - United Nations Secretariat

**DIKSHA Platform**

● National Teacher Platform (NTP) branded as "Diksha" is an initiative of the Ministry of Human Resource Development. It is a state-of-the-art platform built to host Open Educational Resources (OER) and tools for Teachers.

● Teachers can access relevant personalized professional development training anytime and anywhere.

**Global Education Coalition**

● UNESCO has launched the Global Education Coalition to support countries in scaling up their best distance learning practices and reaching children and youth who are most at risk.

● It ties with international organizations, civil society and private sector partners in a broad Coalition to ensure #LearningNeverStops.

● The Coalition aims to help countries in mobilizing resources and implementing innovative and context-appropriate solutions to provide education remotely, leveraging hi-tech, low-tech and no-tech approaches and seek equitable solutions and universal access.

**Prime Minister's Research Fellows (PMRF) Scheme**

● The Prime Minister's Research Fellows (PMRF) Scheme, announced in the 2018-19 Budget, is aimed at improving the quality of research in various higher educational institutions in the country.

● The institutes which can offer PMRF include all the IITs, all the IISERs, Indian Institute of Science, Bengaluru and some of the top Central Universities/NITs that offer science and/or technology degrees.

● Recent Modification:
  ○ The HRD Ministry announced amendments in the Prime Minister’s Research Fellowship (PMRF) scheme including reduction in the required GATE score and introduction of a lateral entry option to attract more students.
  ○ The move was aimed at boosting research in academic institutions across the country.
  ○ Now, the students from any recognised institute/university (other than IISc/IITs/NITs/IISERs/IIEST/CF IIITs) are eligible.
  ○ The requirement of GATE Score is also reduced to 650 from 750 apart from minimum CGPA of 8 or equivalent.
  ○ There will be two channels of entries, one direct entry and lateral entry. In lateral entry, the students, who are pursuing PhD in PMRF granting institutions (like IITs and NITs) can also apply to become fellow under the scheme as per new guidelines.
  ○ The HRD Ministry is creating a dedicated ‘Research and Innovation Division’ to be headed by a director who will be coordinating research work of various institutions coming under the HRD Ministry.
National Test Abhyas

- An Artificial Intelligence powered mobile app was launched by the Ministry of Human Resource and development (MHRD).
- It aims to enable candidates to take mock tests for upcoming exams such as JEE Main, NEET under the National Testing Agency purview, during lockdown.

National Testing Agency (NTA)

- It is an autonomous self-sustained testing organization established in 2017 to conduct entrance examinations for admission in higher educational institutions

VIDYADAAN 2.0

- The Ministry of Human Resource Development launched a national program VidyaDaan 2.0 for inviting e-learning content contributions to meet the growing need for good quality digital content.
- VidyaDaan is conceptualised as a common national program for individuals & organisations across the country to donate/contribute e-learning resources for both school and higher education to ensure continuity of quality learning.
- The content will be used on the DIKSHA app to help millions of children across the country to continue their learning anytime and anywhere.
- Following the launch, States and Union Territories can initiate their own program as part of VidyaDaan 2.0.
- The contributed content will be available for use across the education ecosystem such as government departments, education boards- national and states, schools (government and privates) and for the use of all other institutions, organisations and entities engaged in education.

Aatma Nirbhar Bharat Abhiyaan: Technology Driven Education

- PM eVIDYA, a programme for multi-mode access to digital/online education to be launched consisting of:
  - Over 100 top universities will be permitted to start online courses by May 2020.
  - DIKSHA to become ‘one nation, one digital platform’ for school education- e-content and QR-coded Energized Textbooks for all grades.
  - TV channel earmarked for each class from standard 1 to 12 under ‘one class one channel programme’, Community Radios to broadcast education content
  - Special e-content for visually and hearing impaired students

- New National Curriculum and Pedagogical framework for school, early childhood and teachers will also be launched.

- National Foundational Literacy and Numeracy Mission for ensuring that every child attains Learning levels and outcomes in grade 5 by 2025 will be launched by December 2020.

- Manodarpan, an initiative for psycho-social support for students, teachers and families for mental health and emotional well-being to be launched immediately as well.
National Education Policy, 2020

- The Union Cabinet approved the National Education Policy 2020. The new policy aims to pave way for transformational reforms in school and higher education systems in the country.
- This is the third NEP of India. The first came in 1968 and the second in 1986.
- It aims to increase the public investment in the education sector to reach 6% of GDP at the earliest.

School Education
- Universalization of Education from preschool to secondary level with 100% Gross Enrollment Ratio (GER) in school education by 2030.
- Bring 2 crore out of school children back into the mainstream through an open schooling system.
- The current 10+2 system to be replaced by a new 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively.
- Emphasis on foundational literacy and numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools; Vocational Education to start from Class 6 with internships.
- Teaching up to at least Grade 5 to be in mother tongue/ regional language.
- A new and comprehensive National Curriculum Framework for Teacher Education (NCFTE) 2021, will be formulated by the NCTE in consultation with NCERT. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

Higher Education
- Gross Enrolment Ratio in higher education to be raised to 50% by 2035.
- Broad based, multi-disciplinary, holistic undergraduate education with flexible curricula and multiple entry and exit points with appropriate certification.
- M.Phil courses will be discontinued and all the courses at undergraduate, postgraduate and PhD level will now be interdisciplinary.
- Academic Bank of Credits to be established to facilitate transfer of Credits.
- Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.
- The National Research Foundation will be created as an apex body for building research capacity across higher education.
- Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body for the entire higher education, excluding medical and legal education. It will have four independent verticals:
  - National Higher Education Regulatory Council (NHERC) for regulation,
  - General Education Council (GEC) for standard setting,
  - Higher Education Grants Council (HEGC) for funding,
  - National Accreditation Council (NAC) for accreditation.
- Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges.
Others
○ An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration.
○ Setting up of Gender Inclusion Fund, Special Education Zones for disadvantaged regions and groups
○ National Institute for Pali, Persian and Prakrit, Indian Institute of Translation and Interpretation to be set up.
○ 'PARAKH', National Assessment Centre, has been created to assess the students.

Manodarpan Initiative
● Union HRD Minister launched the Manodarpan initiative to provide Psychosocial Support to students for their Mental Health & Well-being during the COVID outbreak and beyond.
● It has been included in the ATMANIRBHAR BHARAT ABHIYAN, as a part of strengthening human capital and increasing productivity and efficient reform and initiatives for the Education sector.

NISHTHA Programme
● The first on-line NISHTHA programme has been launched by the Ministry of Human Resource Development in Andhra Pradesh.
● NISHTHA is a National Initiative for School Heads’ and Teachers’ Holistic Advancement at the elementary stage under Samagra Shiksha.
● NISHTHA in face-to-face mode was launched on 21st August, 2019. However, due to COVID-19 situation, sudden lockdown has affected the conduct of this programme in face-to-face mode. Therefore, for providing training to the remaining teachers and school heads, NISHTHA has been customized for online mode to be conducted through DIKSHA and NISHTHA portals by the NCERT.
● Modules developed under NISHTHA focus on holistic development of children, initiatives in school education, subject-specific pedagogies, ICT in teaching-learning, leadership, pre-school education, pre-vocational education, etc.

Samagra Shiksha
● Samagra Shiksha is an overarching programme for the school education sector extending from preschool to class 12. It has been prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes.
● It subsumes the three erstwhile Schemes of:
  ○ Sarva Shiksha Abhiyan (SSA)
  ○ Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
  ○ Teacher Education (TE)
- The Scheme will be implemented as a **Centrally Sponsored Scheme** by the Department through a single State Implementation Society (SIS) at the State/UT level.

**DIKSHA**

- DIKSHA is a unique initiative which **leverages existing highly scalable and flexible digital infrastructures**, while keeping teachers at the center. It is built considering the whole teacher’s life cycle - from the time student teachers enroll in Teacher Education Institutes (TEIs) to after they retire as teachers.

- Diksha portal will enable, accelerate and amplify solutions in the realm of teacher education. It will **aid teachers to learn and train themselves** for which assessment resources will be available.

**INDSAT Exam Under ‘Study in India’ Programme**

- The Ministry of HRD conducted the **first ever Indian Scholastic Assessment (Ind-SAT) Test 2020 under its ‘Study in India’ programme**.

- Nearly five thousand **candidates from Nepal, Ethiopia, Bangladesh, Bhutan, Uganda, Tanzania, Rwanda, Sri-Lanka, Kenya, Zambia, Indonesia and Mauritius** appeared for the exam conducted in the proctored internet mode by **the National Testing Agency**.

- **EdCIL (India) Limited**, a PSU under MHRD and the implementing agency of Study in India handled the registrations and other aspects of the examination.

- Ind-SAT is an exam for **grant of scholarships and admissions to foreign students** for studying in select Indian universities.

- **The Finance Minister, as part of the budget speech this year, had announced** that the Ind-SAT exam is proposed to be **held in Asian and African countries**, for benchmarking foreign candidates who receive scholarships for studying in Indian higher education centers.

- The Study in India is a programme of MHRD under which foreign students come to study in **116 select higher education institutions in India** for **undergraduate and postgraduate programmes**. The selection of the students is **based on their merit in the class 12 / school leaving exam**.

**D.P Singh Committee**

It has been set by the **Ministry of Human Resource and Development under UGC chairman D. P Singh** to **Prepare guidelines to ensure more students ‘Stay in India and Study in India**.

**Higher Education Funding Agency (HEFA)**

- **Jawaharlal Nehru University** has got approval from the **Higher Education Funding Agency (HEFA)** for ₹455.02 crore for construction of new infrastructure.

- HEFA was **set up in 2017** by the Central Government, registered under the **Companies Act 2013**, as a **Union Govt company and as Non–deposit taking NBFC with RBI** for mobilising extra-budgetary resources for building crucial infrastructure in the higher educational institutions under Central Government.

- It is a **joint venture** of the Ministry of Human Resource Development (now **Ministry of Education**), **Government of India** and **Canara Bank** with an agreed equity participation in the ratio of 90.91% and 09.09% respectively.
The funding under HEFA will replace the current grant assistance by GOI for infrastructure projects in premier educational institutions.

All the Educational Institutions set up/funded referred by concerned ministries would be eligible for financing their capital expenditure from HEFA.

The HEFA will mobilize resources from the market by way of equity from individuals/corporates and by issue of bonds to finance the requirement.
Rapid Antigen Detection Tests

- It is a test on swabbed nasal samples that detects antigens (foreign substances that induce an immune response in the body) that are found on or within the SARS-CoV-2 virus. It is a point-of-care test, performed outside the conventional laboratory setting, and is used to quickly obtain a diagnostic result.
- RT-PCR is currently the gold standard frontline test for the diagnosis of Covid-19. Like RT-PCR, the rapid antigen detection test too seeks to detect the virus rather than the antibodies produced by the body.
- While the mechanism is different, the most significant difference between the two is time. The RT-PCR test takes a minimum of 2-5 hours including the time taken for sample transportation. These specifications limit the widespread use of the RT-PCR test and also impedes quick augmentation of testing capacity in various containment zones and hospital settings. In a reliable rapid antigen detection test, the maximum duration for interpreting a positive or negative test is 30 minutes.
- However, antigen tests are very specific for the virus, but are not as sensitive as molecular PCR tests. This means that positive results from antigen tests are highly accurate, but there is a higher chance of false negatives, so negative results do not rule out infection.

Airborne Transmission

- In the context of transmission of viruses, as in this case, aerosols are read as micro droplets, much smaller (5 microns or less) than respiratory droplets, and take a longer time to drop to the floor.
- As per the recent proposal of scientists that Some sci that COVID-19 is also transmitted via aerosols, “at typical indoor air velocities, a 5 micron droplet will travel tens of metres, much greater than the scale of a typical room, while settling from a height of 1.5 m to the floor.”
  - In common understanding, aerosols are minute particles that are expelled under pressure, as in the case of fine mist from a jar of perfume, or a can of roach repellent.
  - However, aerosol is a term used to broadly refer to particles suspended in the air; they could include fine dust, mist, or smoke.

Oropharyngeal Secretions

- Researchers have reported that testing of oropharyngeal secretions, secretions from the part of the throat at the back of the mouth, may reduce the number of false negative results of COVID-19.
- False negatives have been reported several times during the Covid-19 pandemic. These results have come up during nasal swab testing of patients who have seemingly recovered from the disease — but have later been found to be still carrying the virus.

RECOVERY Trial

- It is a large randomised controlled trial in the U.K. to test five drugs for COVID-19.
The RECOVERY Trial are testing these suggested treatments:

- Lopinavir-Ritonavir (commonly used to treat HIV)
- Low-dose Dexamethasone (an anti-inflammatory medication)
- Hydroxychloroquine (used to treat malaria, lupus, and rheumatoid arthritis)
- Azithromycin (a commonly used antibiotic)
- Tocilizumab (an anti-inflammatory treatment given by injection)

Solidarity Trial

The Solidarity trial for treatments is a multinational Phase III-IV clinical trial organized by the World Health Organization (WHO) and partners to compare four untested treatments for hospitalized people with severe COVID-19 illness. They are

- Remdesivir
- Lopinavir/ritonavir combined
- Lopinavir/ritonavir combined with interferon-beta
- Hydroxychloroquine or chloroquine (discontinued due to no benefit, June 2020)

Global Vaccine Summit

- The Summit was hosted by the United Kingdom (UK).
- Almost 50 countries including the business leaders, UN agencies, civil society, government ministers, Heads of State and country leaders participated in the Summit.
- From India, Our Prime Minister addressed this virtual Global Vaccine Summit and India pledged $15 million to Gavi.
- GAVI, officially Gavi, the Vaccine Alliance (previously the GAVI Alliance, and before that the Global Alliance for Vaccines and Immunization) is a public–private global health partnership with the goal of increasing access to immunisation in poor countries.
- GAVI brings together developing country and donor governments, the World Health Organization, UNICEF, the World Bank, the vaccine industry in both industrialised and developing countries, research and technical agencies, civil society, the Bill & Melinda Gates Foundation, and other private philanthropists.
- GAVI has observer status at the World Health Assembly.
- In the Pandemic, India had shared its stocks of medicines with over 120 countries, set up a common response strategy in its immediate neighbourhood and provided specific help to countries in need while protecting its own population.

Global Outbreak Alert and Response Network (GOARN)

- GOARN is a technical partnership established in 2000 by the World Health Organization (WHO) as a key mechanism to engage the resources of technical agencies for rapid identification, confirmation and response to major international public health emergencies.
- It is a network composed of numerous technical and public health institutions, laboratories, NGOs, and other organizations that work to observe and respond to threatening epidemics.
GOARN works closely with and under the World Health Organization (WHO), which is one of its most notable partners. Its goals are to: examine and study diseases, evaluate the risks that certain diseases pose, and improve international capability to deal with diseases.

Bubonic Plague
- The bubonic plague, known as the “Black Death” in the Middle Ages, is a highly infectious and often fatal disease that is spread mostly by rodents. It is a zoonotic disease, which means it can jump from animals to humans.
- Plague is an infectious disease caused by the bacteria Yersinia pestis, usually found in small mammals and their fleas. The disease is transmitted between animals via their fleas and, as it is a zoonotic bacteria, it can also transmit from animals to humans.
- It is one of the three plagues caused by bacterium Yersinia pestis. The other two being Septicaemic plague and Pneumonic plague.

Kawasaki disease
- Kawasaki disease is a syndrome of unknown cause that results in a fever and mainly affects children under 5 years of age. It is a form of vasculitis, where blood vessels become inflamed throughout the body.
- It is a rare disease and does not spread between people.
- The disease derives its name from a Japanese paediatrician, Tomisaku Kawasaki, who reported the first case in 1961. The doctor, 95, died on June 5 this year in Tokyo.

Kala Azar Disease
Leishmaniasis is a neglected tropical disease affecting almost 100 countries including India. It is caused by a parasite called Leishmania, which is transmitted through the bite of sand flies.

Healthcare & Hygiene EXPO 2020
- Minister of Chemicals & Fertilisers inaugurated India's one the largest 1st Virtual Healthcare & Hygiene EXPO 2020.
- The expo was organised by FICCI to create a self-reliant ecosystem in the Pharmaceuticals and Health & Hygiene Sector by ramping up domestic production.

Global Nutrition Report 2020
- WHO released the Global Nutrition Report 2020 that stated that India is among 88 countries that are likely to miss global nutrition targets by 2025.
- India also has the highest rates of domestic inequalities, especially in malnutrition.

Global Nutrition Targets
- In 2012, the World Health Assembly (decision-making body of the World Health Organisation) identified six nutrition targets to be met by 2025. These are:
  - Reduce stunting by 40% in children under 5.
  - Reduce the prevalence of anaemia by 50% among women in the age group of 19-49 years.
○ Ensure 30% reduction in low-birth weight.
○ Ensure no increase in childhood overweight.
○ Increase the rate of exclusive breastfeeding in the first six months up to at least 50%
○ Reduce and maintain childhood wasting to less than 5%.

**Cytokine Storms**

- The **immune systems** in human bodies **protect** from bacteria, viruses, and parasites by removing them from systems. The **immune system gets activated** by things that the body does not recognise as its own. These things are called **antigens**, and include bacteria, fungi and viruses.
- An **effective immune system response** involves **inflammation**, an important and indispensable part of the process. The release of inflammatory mediators increases the blood flow to the area, which allows larger numbers of immune system cells to be carried to the injured tissue, thereby aiding the repairing process.
- However, if this **inflammatory response is not regulated**, it can lead to very dangerous consequences triggering a ‘**cytokine storm**’.
- A **cytokine storm or cytokine storm syndrome (CSS)** is characterised by the overproduction of **immune cells and the cytokines** themselves because of a dysregulation in the process. Cytokines are **signaling proteins** that are released by cells at local high concentrations.
- Cytokine storms are not exclusive to coronavirus patients. It is an immune reaction that can occur during other infectious and non-infectious diseases as well.

**Science and Technology of Yoga and Meditation (SATYAM)**

- The **Department of Science and Technology (DST)** has invited proposals under the **Science and Technology of Yoga and Meditation (SATYAM)** programme to study appropriate **intervention of yoga and meditation** in fighting COVID-19 and similar kinds of viruses.
- SATYAM, a cognitive science programme, was **conceptualised** by the DST under its Cognitive Science Research Initiative (CSRI) in 2015. The programme is **aimed** to foster **scientific research** on the effects of yoga and meditation on physical & mental health and on cognitive functioning in healthy people as well as in patients with disorders.

**Covid-19 Sample Collection Kiosk (COVSACK)**

- **Defence Research & Development Laboratory (DRDL)**, Hyderabad, in consultation with the doctors of Employees’ State Insurance Corporation (ESIC), Hyderabad developed **COVID Sample Collection Kiosk (COVSACK)**.
- The COVSACK is a kiosk for use by healthcare workers for taking COVID-19 **samples from suspected infected patients**. Patient under test **walks into the Kiosk and a nasal or oral swab** is taken by a healthcare professional from outside through the built in gloves.
- The Kiosk is **automatically disinfected** without the need for human involvement, making the process free of infection spread.

**Defence Research & Development Laboratory (DRDL)**

- **DRDL**, founded in1961 is responsible for the **design and development of state-of-the-art Missile Systems** and technologies required for the deterrence and defence of the country.
It comes under the Defence Research and Development Organisation (DRDO).

**Chitra GeneLAMP-N**
- Sree Chitra Tirunal Institute for Medical Sciences and Technology has developed a diagnostic test kit, called Chitra GeneLAMP-N, that can confirm COVID19 in 2 hours at low cost.
- The confirmatory diagnostic test, which detects the N Gene of SARS-COV2 using reverse transcriptase loop-mediated amplification of viral nucleic acid (RT-LAMP), will be one of the world’s first few if not the first of its kinds in the world.
- It is highly specific for SARS-CoV-2 N-gene and can detect two regions of the gene, which will ensure that the test does not fail even if one region of the viral gene undergoes mutation during its current spread.
- Current Polymerase chain reaction (PCR) kits in India enable detection of E gene for screening and RNA-dependent RNA polymerase (RdRP, RDR) gene for confirmation. Chitra GeneLAMP-N gene testing will allow confirmation in one test without the need for a screening test and at much lower costs.

**Post-Intensive Care Syndrome (PICS)**
- PICS is defined as new or worsening impairment in physical (ICU-acquired neuromuscular weakness), cognitive (thinking and judgment), or mental health status arising after critical illness and persisting beyond discharge from the acute care setting. Further, such patients may experience neuromuscular weakness, which can manifest itself in the form of poor mobility and recurrent falls.

**Medicine tried For COVID-19**
- Sepsivac : It was originally developed for treating sepsis by a class of pathogens called gram negative bacteria, that are known to cause life-threatening infections. Given the similarities in the immune-system response in critically ill COVID-19 patients, it is theorised, the therapy could stimulate a benign response.

**Feluda (FnCas9 Editor Linked Uniform Detection Assay)**
- Scientists at the Council of Scientific & Industrial Research — Institute of Genomics and Integrative Biology (CSIR-IGIB) have developed a low-cost, paper-strip test which can detect the new coronavirus within an hour.
- The test, named Feluda after a fictional detective character created by Satyajit Ray, is expected to cost around Rs 500 against the RT-PCR test that costs Rs 4,500 in private labs.
- The test is based on a bacterial immune system protein called Cas9. It uses cutting-edge gene-editing tool Crispr-Cas9 system.
- This technology is not limited to COVID-19 and can work on any DNA-RNA or single mutations, disease mutations etc.

**Satyajit Ray (1921-1992)**
- Satyajit Ray was an Indian filmmaker, screenwriter, music composer, graphic artist, lyricist and author, widely regarded as one of the greatest filmmakers of all time.
● Notable work: *Pather Panchali*, Aparajito, Sonar Kella and many more
● Awards: Academy Honorary Award, Bharat Ratna and many more
● Books: *The Complete adventures of Feluda*, Our Films, Their Films and many more
● ‘*Pather Panchali*’ finds 15th place on BBC’s 100 Best Foreign Language Films list of 21st century.

### Telemedicine and Telehealth Care

- **Telemedicine** is the **practice of medicine using technology** to deliver care at a distance. A physician in one location uses a telecommunications infrastructure to deliver care to a patient at a distant site.
- Telehealth refers broadly to **electronic and telecommunications technologies** and services used to provide care and services at-a-distance.
- Telehealth is different from telemedicine in that it refers to a broader scope of remote health care services than telemedicine. Telemedicine refers specifically to remote clinical services, while telehealth can refer to remote non-clinical services, such as providing training, administrative meetings, and continuing medical education. According to the World Health Organization, telehealth includes, “Surveillance, health promotion and public health functions.”

### Chitra Acrylosorb Secretion Solidification System

Scientists at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), autonomous medical institute under the Department of Science and Technology (DST) at Thiruvananthapuram, have designed and developed a highly efficient superabsorbent material for liquid respiratory and other body fluid solidification and disinfection for the safe management of infected respiratory secretions. The material titled ‘*Chitra Acrylosorb Secretion Solidification System*’.

### Koi Sleepy Disease

- It is caused by **carp edema virus (CEV)**, a pox virus which is a potential carp killer and poses a constant threat to co-cultured fish (ornamental fish farming).
- Virus affects the gills, lungs and kidney of fish.
- Goldfish (Carassius auratus) and koi carp (Cyprinus carpio koi) are the most commonly traded ornamental fish species.

### Madhuban Gajar

- Madhuban Gajar, a **biofortified carrot variety** with high β-carotene and iron content, was developed by Shri Vallabhbhai Vasrambhai Marvaniya, a farmer scientist from Junagadh district, Gujarat.
- It is a highly nutritious carrot variety developed through the selection method with higher β-carotene content (277.75 mg/kg) and iron content (276.7 mg/kg) dry basis.
- **Biofortification** is the process of *breeding crops with higher levels of vitamins and minerals*, or higher protein and healthier fats. This can be done either through conventional selective breeding, or through genetic engineering.
- Other examples: CR Dhan(Rice) 310, DRR Dhan 45, MACS 4028(Wheat Variety), Pearl millet, Pusa Mustard 30.

World Chagas Disease Day

- For the first time, the global community celebrated 14 April as the first World Chagas Disease Day. It was on this date in 1909 that the first patient, a Brazilian girl named Berenice Soares de Moura, was diagnosed for this disease by Dr Carlos Ribeiro Justiniano Chagas.
- Chagas disease, also called American trypanosomiasis, has been termed as a “silent and silenced disease”, not only because of its slowly progressing and frequently asymptomatic clinical course but also because it affects mainly poor people who have no political voice or access to health care.
- It is a tropical parasitic disease caused by the protist Trypanosoma cruzi. It is a vector-borne disease usually transmitted by faeces and urine of triatomine bugs or kissing bugs, which belongs to the family of assassin bugs.
- Chagas disease is classified as a neglected tropical disease.

Neglected tropical diseases

- They are a diverse group of tropical infections which are common in low-income populations in developing regions of Africa, Asia, and the Americas. They are called so as they generally receive lesser treatment and research funding.
- Examples: Dracunculiasis (Guinea-Worm disease), Yaws, Blinding Trachoma, Leprosy, Lymphatic Filariasis.

Indian Initiative on Earth BioGenome Sequencing (IIEBS)

- IIEBS is a nationwide project to decode the genetic information of all known species of plants and animals in the country.
- The National Institute of Plant Genome Research, New Delhi is the coordinating centre for the nationwide project involving a total of 24 institutes.

Alzheimer Inhibitor Ber-D

- Scientists from Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR) have modified the structure of Berberine, a natural and cheap product similar to curcumin, available commercially, into Ber-D to use as a Alzheimer’s inhibitor.
- Scientists led the quest to discover natural product based therapeutic candidates for Alzheimer’s disease, and selected isoquinoline natural product berberine found in India and China and used in traditional medicine and other applications.
- However, berberine is poorly soluble and toxic to cells. So they modified berberine to Ber-D, which is a soluble (aqueous), antioxidant. They found it to be a multifunctional inhibitor of multifaceted amyloid toxicity of Alzheimer’s disease.

Alzheimer’s disease

- A progressive disease that destroys memory and other important mental functions.
- Brain cell connections and the cells themselves degenerate and die, eventually destroying memory and other important mental functions.
Memory loss and confusion are the main symptoms.

- It is the most prevalent neurodegenerative disorder & accounts for more than 70% of all dementia.
- No cure exists, but medication and management strategies may temporarily improve symptoms.

**Dementia**

- Dementia is an overall term for diseases and conditions characterized by a decline in memory, language, problem-solving and other thinking skills that affect a person's ability to perform everyday activities. Memory loss is an example.

**Immunity Passport**

- Immunity passports are some form of certificates to people who have been sick with the virus and been recovered.
- This works on the assumption that these people would be immune to reinfection due to the presence of antibodies.
- However, according to WHO, there is no scientific evidence to prove that people who have recovered from the coronavirus develop immunity against potential infection in the future.

**Vertical transmission**

- ICMR said that the available scientific evidence suggests that vertical transmission of the virus i.e. transmission of an infection from a pregnant woman to her child can happen to a baby before the birth.
- There is no evidence currently that the virus is teratogenic.
  - Teratogenic means that any agent that can disturb the development of an embryo or fetus. Teratogens may cause a birth defect in the child.

**Polio-fighting strategy of India**

- WHO chief has welcomed the world health body's cooperation with India to leverage strategies that helped the country win its war against polio into the response to COVID-19 outbreak.
- The WHO release said strengths of the WHO's National Polio Surveillance Project team surveillance, data management, monitoring and supervision, and responding to local situations and challenges will be utilized to supplement efforts of the National Centre for Disease Control and Indian Council of Medical Research to strengthen COVID-19 surveillance.

**National Polio Surveillance Project:**

- WHO and India established it in 1996.
- National polio surveillance unit was created in New Delhi to provide technical assistance, training and logistic support to all Surveillance Medical officers in the field.

**African Swine Fever (ASF)**

- First time an ASF outbreak has been reported in India which has killed over 3000 pigs in Assam.
- It is caused by a large DNA virus of the Asfarviridae family.
- It is highly contagious and fatal animal disease that infects and leads to an acute form of hemorrhagic fever.
No Human transmission reported
100% mortality rate in Pigs.

COVID Action Platform
- It was launched by the World Economic Forum (WEF).
- The spread of COVID-19 demands global cooperation among governments, international organizations and the business community.

India’s COVID-19 Social Protection Response Programme
- The World Bank has announced a $1 billion assistance for the proposed program
- It aims to provide social assistance to the poor and vulnerable households severely affected by the COVID-19 pandemic.
- It will be implemented by the Ministry of Finance.
- Funding will happen in 2 Phases
  ○ The first phase will be implemented through the Pradhan Mantri Garib Kalyan Yojana (PMGKY) with the allocation of $750 million for fiscal year 2020.
  ○ In the second phase, additional benefits based on local needs will be extended through state governments and a $250 million second tranche will be made available for fiscal year 2021.

Report On Immunisation
- Around 60% of children under five years of age were fully immunised, a survey conducted by National Statistical Office (NSO) during July 2017-June 2018 shows.
- This includes about 59% of boys and 60% of girls across the country who had been fully immunised with all eight prescribed vaccinations — BCG, OPV- 1, 2, 3, DPT- 1,2,3 and measles.
- In rural India, about 58% (57% boys and 60% girls) children under five years, and about 62% (62% boys and 61% girls) children in urban India had been fully immunised.
- The report also shows a decline in estimated anaemia cases during the 75th round of the survey with cases dropping to 5,96,200 from 8,80,700 during the 71st round. Proportion of persons suffering from tuberculosis has fallen to half during the latest survey to 38 per 1,00,000 persons from the earlier level of 76 per 1,00,000.
- The Intensified Mission Indradhanush, launched by Government of India in 2017, aims to reach each and every child under two years of age and all pregnant women who have been left uncovered under the routine immunisation programme.
- Majority of the children received vaccination from government hospitals or clinics.
- About 95% of children in rural India and 86% of children in urban India had received some vaccination from government hospitals including primary and community health centres or even Anganwadi centres.
- Private sector catered to about 5% of children in rural India, though the percentage was slightly higher at 14% of children in urban India who received any vaccination.
- Punjab got its first plasma bank at Patiala's Rajindra Hospital where those who have recovered from the novel coronavirus can donate their blood plasma to help treat COVID-19 patients.
The National Green Tribunal said that segregation of COVID-19 waste from others is a must to avoid further contamination adversely affecting public health.

- In India, Biomedical Waste Management Rules, 2016 deal with waste generated in infectious diseases like Covid-19.

Sero-Surveillance

- National Centre for Disease Control (NCDC), a body under administrative control of the Union Ministry of Health and Family Welfare, conducted a sero-surveillance study for Covid-19 in New Delhi from 27th June - 10th July 2020.
- Serosurveillance provides estimates of antibody levels against infectious diseases and is considered the gold standard for measuring population immunity due to past infection or vaccination.
- It is an important component of disease surveillance and complements notification, hospitalisation, mortality and immunisation coverage data.
- The results of the sero-prevalence study show that on an average, across Delhi, the prevalence of IgG antibodies is 23.48%. The study also indicates that a large number of infected persons remain asymptomatic.

First Indigenous Vaccine For Infant Pneumonia Approved

- The Drug Controller General of India (DCGI) has approved the first fully indigenously developed conjugate vaccine for pneumonia developed by the Serum Institute of India Pvt. Ltd, Pune.
- Serum institute conducted Phase I, Phase II and Phase III clinical trials of Pneumococcal Polysaccharide Conjugate Vaccine in India. It has also conducted clinical trials in Gambia.
- This vaccine is used for active immunisation against invasive disease and pneumonia caused by “streptococcus pneumonia” in infants. The vaccine is administered intramuscularly.

Pneumonia

- Pneumonia is an infection in one or both lungs. Bacteria, viruses, and fungi cause it.
- The infection causes inflammation in the air sacs in lungs, which are called alveoli. The alveoli fill with fluid or pus, making it difficult to breathe.
- The germs that cause pneumonia are contagious. This means they can spread from person to person.
- Both viral and bacterial pneumonia can spread to others through inhalation of airborne droplets from a sneeze or cough.
- Fungal pneumonia can be contracted from the environment. However, it doesn’t spread from person to person.

Initiatives against Pneumonia

- Social Awareness and Action to Neutralise Pneumonia Successfully (SAANS) campaign: It was launched by the Health
Ministry to spread awareness and preferential treatment of Pneumonia.


The Advanced Persistent Threat 29 (APT-29)

- ATP-29, also known as "Cozy Bear" and The Dukes, are familiar names in cybersecurity circles.
- APT29 is using custom malware known as ‘WellMess’ and ‘WellMail’ to target a number of organisations globally including those organisations involved with COVID-19 vaccine development.
- The hackers targeted "valuable intellectual property (IP) and public health data related to vaccines, treatments, and testing from networks and personnel affiliated with COVID-19-related research as alleged by the US, UK and France.

WHO Launches Covid-19 Law Lab For Implementing Legal Frameworks To Manage Pandemic

- The new Lab is a joint project of the United Nations Development Programme (UNDP), WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the O’Neill Institute for National and Global Health Law at Georgetown University.
- The covid-19 Law Lab is a database of laws that 190 countries have implemented in response to the pandemic.
- It includes state of emergency declarations, quarantine measures, disease surveillance, legal measures relating to mask-wearing, social distancing, and access to medication and vaccines.

COVAX Alliance

- GAVI's vaccine alliance said that more than 75 countries have expressed interest in joining the COVAX financing scheme designed to guarantee fast and equitable access globally to COVID-19 vaccines.
- COVAX is co-led by GAVI, the World Health Organization and the CEPI Coalition for Epidemic Preparedness Innovations. Its aim is to deliver 2 billion doses via the COVAX Advanced Market Commitment of effective, approved COVID-19 vaccines by the end of 2021.
- AstraZeneca, which is developing a potential COVID-19 shot known as AZD1222, has agreed to supply 300 million doses to COVAX if the vaccine proves effective and is licensed.

COVAX Facility

- The World Health Organisation has renewed its invite to countries to join its COVAX facility, an international alliance aimed at accelerating the development and manufacture of novel Coronavirus vaccines, and ensuring equitable access to all.
- The COVAX facility, launched in April 2020, is stitching together agreements with developers and manufacturers of vaccine candidates it thinks are most likely to succeed.
- It is trying to raise funds to support the rapid development of promising candidates, and the quick expansion of manufacturing capacities, so that the vaccines once approved, could be produced on mass scale.
It aims to **procure at least two billion doses** of a novel Coronavirus vaccine by the end of next year, for deployment and distribution mainly in the **low and middle income countries**.

- The countries who join the initiative are also **assured supply of vaccines** whenever they become successful. The countries will get assured supplies to protect at least 20 percent of their populations.

**BelYo, India’s First Covid-19 Blockchain Platform**

BelYo uses the **BelfricsBT Belrium blockchain platform** to convert Covid-19-related **clinical and vaccination data of citizens** currently from the physical form into digital assets, which can be retrieved by contact tracing apps like **Aarogya Setu** via application programme interface (API).

**Operation Breathing Space**

India and Israel are jointly conducting trials to determine the effectiveness of advanced technologies developed for the **rapid diagnosis of coronavirus** infection.

**Pradhan Mantri Jan Arogya Yojna (PM-JAY)**

- The nationwide lockdown had a significant negative impact on inpatient care utilisation under the **Pradhan Mantri Jan Arogya Yojna or PM-JAY**, where claim volumes fell by over 50%, with wide variation across the States and procedure types.
- The steepest decline (over 75%) was registered in Assam, followed by Maharashtra and Bihar, while much smaller declines (about 25% or less) were observed in Uttarakhand, Punjab and Kerala.
- PM-JAY scheme is the **second component under Ayushman Bharat** and was launched in **September, 2018** in Ranchi, Jharkhand.
- Ayushman Bharat PM-JAY is the largest health assurance scheme in the world which aims at **providing a health cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization** to over 10.74 crores poor and vulnerable families that form the bottom 40% of the Indian population.
- The households included are based on the deprivation and occupational criteria of **Socio-Economic Caste Census 2011 (SECC 2011)** for rural and urban areas respectively.
- PM-JAY was **earlier known as the National Health Protection Scheme (NHPS)** before being rechristened. It **subsumed** the then existing **Rashtriya Swasthya Bima Yojana (RSBY)** which had been launched in 2008.
- The coverage mentioned under PM-JAY, therefore, also includes families that were covered in RSBY but are not present in the SECC 2011 database.
- PM-JAY is **fully funded by the Government** and cost of implementation is shared between the Central and State Governments.
- **Benefits of the scheme are portable across the country** i.e. a beneficiary can visit any empanelled public or private hospital in India to avail cashless treatment.

**Smallpox**

- Smallpox is an **acute contagious disease** caused by **variola virus**, a member of the **Orthopoxvirus family**.
● It is transmitted from person to person by infected aerosols and air droplets spread in face-to-face contact with an infected person. It can also be transmitted by contaminated clothes and bedding, though the risk of infection from this source is much lower.

● The global eradication of smallpox was certified in December 1979 and endorsed by the World Health Assembly in 1980.

Viking Age
● The Viking Age (793–1066 AD) was the period during the Middle Ages when Norsemen known as Vikings undertook large-scale raiding, colonizing, conquest and trading throughout Europe, and reached North America.

Malaria
● Hindustan Insecticides Limited (HIL, India), a PSU under the Ministry of Chemicals and Fertilizers, supplied 20.60 Metric tonne of DDT to South Africa for their Malaria control program.
  ○ HIL (India) is the sole manufacturer of DDT globally. The company was incorporated in 1954 to manufacture and supply DDT to the Government of India’s Ministry of Health and Family Welfare for malaria control programmes.

● Malaria is a mosquito-borne infectious disease that affects humans and other animals.

● It is caused by single-celled microorganisms of the Plasmodium (parasite) group. The disease is most commonly spread by an infected female Anopheles mosquito.

● Dichlorodiphenyltrichloroethane (DDT), is a colorless, tasteless, and almost odorless crystalline chemical compound, an organochlorine. Originally developed as an insecticide, it became infamous for its environmental impacts.

ChAdOx1 COVID-19 Vaccine
● In early human trials of a Covid-19 vaccine, ChAdOx1, developed by the University of Oxford and drugmaker AstraZeneca has been found safe. The vaccine belongs to a category called non-replicating viral vector vaccines.

● When someone is infected with the Covid-19 virus (SARS-CoV-2), the reason it spreads in the body easily is because of the spikes on its surface. These spikes, known as the ‘spike protein’, allow the virus to penetrate cells and, thereafter, multiply.

● The vaccine tries to build the body’s immunity against this spike protein. It creates antibodies to fight this spiked surface so that the virus does not even have the chance to penetrate the cells.

● The vaccine uses a different virus — in this case, a weakened version of a common cold virus (adenovirus) that infects chimpanzees — to carry just the code to make the spike protein. The adenovirus, genetically modified so that it cannot replicate in humans, will enter the cell and release the code to make only the spike protein.

● The body’s immune system is expected to recognise the spike protein as a potentially harmful foreign substance, and starts building antibodies against it. Once immunity is built, the antibodies will attack the real virus if it tries to infect the body.

● Another potential positive was that it increased the number of T cells — a type of white blood cell that protects the body from pathogens and cancer cells and works to actively destroy infected cells.
**Covishield**
- The Drugs Controller General of India (DCGI) has approved the application of Serum Institute of India (SII) to conduct late-stage human trials in the country for the Covid-19 vaccine - Covishield.
- Covishield – the name given to the Oxford-AstraZeneca Covid-19 vaccine candidate and is technically referred to as AZD1222 or ChAdOx1 nCoV-19.
- SII, the world’s largest maker of vaccines, has a tie-up with AstraZeneca, the Swedish-British pharma giant, to manufacture the Covid-19 vaccine for low- and middle-income countries.

**Inflammageing**
- The most severe Covid-19 cases have occurred mostly in older people, researchers are investigating whether inflammmageing has a role.
- Inflammm-aging (also known as inflammmaging or inflammm-ageing) is a chronic low-grade inflammation that develops with advanced age. It is believed to accelerate the process of biological aging and to worsen many age-related diseases.
- Immune system undergoes profound changes during ageing. Adaptive immune response becomes less effective as lymphocyte numbers are reduced in the elderly.

**Inflammation**
- Inflammation is part of the complex biological response of body tissues to harmful stimuli, such as pathogens, damaged cells, or irritants, and is a protective response involving immune cells, blood vessels, and molecular mediators.
- The function of inflammation is to eliminate the initial cause of cell injury, clear out necrotic cells and tissues damaged from the original insult and the inflammatory process, and initiate tissue repair.

**Lymphocyte**
- A lymphocyte is one of the subtypes of a white blood cell in a vertebrate’s immune system.
- Lymphocytes include natural killer cells (which function in cell-mediated, cytotoxic innate immunity), T cells (for cell-mediated, cytotoxic adaptive immunity), and B cells (for humoral, antibody-driven adaptive immunity).

**Electronic Vaccine Intelligence Network**
- To support the Government of India’s efforts to combat COVID-19, Electronic Vaccine Intelligence Network (eVIN) India is helping the State/UT governments monitor the supply chain of COVID response material.
- eVIN is an innovative technological solution aimed at strengthening immunization supply chain systems across the country.
- This is being implemented under the National Health Mission (NHM) by the Ministry of Health and Family Welfare.

**Tick-Borne Virus**
- A disease called Severe Fever with Thrombocytopenia Syndrome, caused by the tick-borne virus, has killed seven and infected at least 60, setting off alarm bells among health officials in China.
Severe fever with thrombocytopenia syndrome virus (SFTSV) belongs to the Bunyavirus family and is transmitted to humans through tick bites. Chinese virologists have warned that human-to-human transmission of the virus cannot be ruled out.

Unlike SARS-CoV-2 however, this is not the first time the SFTS virus has infected people. The recent spate of cases merely marks a re-emergence of the disease. The virus was first identified by a team of researchers in China over a decade ago. The first few cases were reported in rural areas of Hubei and Henan provinces in 2009.

The current case fatality rate rests between approximately 16 and 30 per cent and due to the rate at which it spreads and its high fatality rate, SFTS has been listed among the top 10 priority diseases blueprint by the World Health Organisation (WHO).

- In epidemiology, a case fatality rate — sometimes called case fatality risk or case-fatality ratio — is the proportion of deaths from a certain disease compared to the total number of people diagnosed with the disease for a particular period.
- Asian tick called Haemaphysalis longicornis is the primary vector, or carrier, of the virus but the virus is also transmitted to humans from animals like goats, cattle, deer and sheep.
- Despite being infected by the virus, animals generally do not show any symptoms associated with SFTSV.
- While a vaccine to treat the disease is yet to be successfully developed, the antiviral drug Ribavirin is known to be effective in treating the illness.

Salmonella Infection

- The salmonella bacteria resides in animals. When it enters a human body it causes salmonellosis, an infection that attacks the intestine, and can cause diarrhoea, abdominal pain, fever, vomiting, bleeding in stool and nausea.
- Salmonella can transmit to humans through contaminated water or food.
PERSON IN NEWS

J.K. Rowling
- J.K. Rowling released “The Ickabog,” a new story for young readers, for free online.
- She is a British author, film producer, television producer, screenwriter, and philanthropist and best known for writing the Harry Potter fantasy series.
- Some other famous books: The Casual Vacancy, Robert Galbraith, Lethal White

Game of Life
- Game of Life is a zero-player game, which means the game plays itself. Take an array of square cells, like a chessboard, but stretching infinitely in both the horizontal and vertical directions.
- A cell may be either living or dead at any given time (but not both simultaneously). The fate of a cell depends on its “neighbours” — the eight other cells that touch it horizontally, vertically or diagonally.
- The Game of Life opened up a new field of mathematical research, in “cellular automata”.

John Hume
- John Hume, the visionary politician who won a Nobel Peace Prize for fashioning the agreement that ended violence in his native Northern Ireland, has died at 83.
- He is widely regarded as one of the most important figures in the recent political history of Ireland, as one of the architects of Northern Ireland’s 1998 peace agreement.
- Hume was co-recipient of the 1998 Nobel Peace Prize with David Trimble, for their efforts to end the sectarian violence that plagued the region for three decades and left more than 3,500 people dead.
- Hume also received both the Martin Luther King Award(1999) and the Gandhi Peace Prize(2001). He is the only person to receive the three major peace awards.

SPORTS

NADA App by Sports Ministry
The Sports Ministry unveiled National Anti-Doping Agency’s first mobile app to provide information about prohibited substances and their inadvertent use, calling the initiative an important step towards dope-free sports.

World Games
- The World Games 2021 has been postponed by nearly a year to avoid a clash with the Tokyo Olympic Games.
The 11th Edition of the World Games had originally been planned to take place from 15–25 July 2021. Now it will be held from 7th to 17th July 2022.

The 11th Edition of the World Games 2021 will be hosted by Birmingham, United States.

About the World Games
- Organized by the International World Games Association (IWGA)
- A multi-sport event that is held every 4 Years, typically an year after the Summer Olympics.
- It includes sporting events for 32 sports that are not part of the Olympic programme.
- It was first held in 1981 and so far, it has not yet been held in African countries.

India to Host Asian Boxing Championship
- India will be hosting the 2020 Asian Boxing Championships for men and women between November-December 2020.
- The event is usually a biennial competition but was held in consecutive years in the past.
- India last hosted the men’s Asian meet back in 1980 in Mumbai, while it conducted the women’s event in 2003 in Hisar (Haryana).
- The tournament became a combined event for men and women in 2019.

Khelo India Youth Games 2021
- Union Minister of Youth Affairs and Sports announced Haryana as the host state for the fourth edition of Khelo India Youth Games, which is currently scheduled to take place after the Tokyo Olympics. The Games will be held in Panchkula in Haryana.
- Khelo India Youth Games is a part of the revamped national programme for development of sports, Khelo India.
- The Khelo India programme has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports and establish India as a great sporting nation.

Awards

South Korea To Fete Indian Army Officer
- To mark the 70th anniversary of the Korean War this year, the South Korean government will honour an Indian Army officer Lt Colonel AG Rangaraj.
- He will be facilitated as the ‘Korean War Hero for the month of July 2020’ for his huge contribution during the period of the war.
- The Korean War took place from June 25, 1950 to July 27, 1953.
- Rangaraj commanded the 60 Para Field Ambulance which was a medical unit of the Indian Army responsible for providing medical treatment to a large number of soldiers during the Korean War.

Festival of Innovation & Entrepreneurship (FINE)
- FINE, previously known as Festival of Innovation (FOIN), is hosted in the month of March at The President’s House.
It is a unique initiative of the Office of the President of India in association with the National Innovation Foundation (NIF) to recognise, respect and reward grassroots innovations and foster a supportive ecosystem.

Prime Minister’s Awards for Excellence in Public Administration 2020
- The Union Minister for Personnel has launched the restructured Prime Minister’s Awards for Excellence in Public Administration 2020 scheme and web portal.
- The scheme for the very first time seeks to recognize the efforts of District level officials in the Namami Gange Programme.
- The scheme has been revamped to recognize the performance of the District Collectors towards outcome indicators, economic development, peoples' participation and redressal of public grievances.
- Nominations have been called in four major categories –
  - District Performance Indicators Programme
  - Innovation General Category
  - Aspirational Districts Program
  - Namami Gange Program
- The Government of India instituted “The Prime Minister's Awards for Excellence in Public Administration” in 2006 to acknowledge, recognize and reward the extraordinary and innovative work done by Districts/ Organizations of the Central and State Governments.
- The Scheme was restructured in 2014 for recognizing the performance of District Collectors in Priority Programmes, Innovations and Aspirational Districts.

IMPORTANT DAYS/DATES

World Population Day 2020
- World Population Day is observed on July 11 every year to make people aware about the rising population and increase awareness about family planning, gender equality and maternal health.
- Theme 2020- "How to safeguard the health and rights of women and girls now"
- The United Nations Development Programme recommended the introduction of World Population Day in 1989, inspired by the public interest and awareness that was created by "Five Billion Day" on July 11, 1987 when the world's population reached 5 billion.
- The United Nations Population Fund (UNFPA) seeks to create awareness about the issues associated with the population.

World Youth Skills Day
- World Youth Skills Day, observed annually on 15 July, celebrates the importance of equipping young people with skills for decent employment and entrepreneurship.
- Theme for 2020: "Skills for a Resilient Youth".
- The day marks the 5th anniversary of the launch of Skill India Mission.
International Youth Day

- In 1999, the General Assembly endorsed the recommendation made by the World Conference of Ministers Responsible for Youth (Lisbon, 8-12 August 1998) that 12 August be declared International Youth Day.
  - 2020 Theme: Youth Engagement for Global Action

Others

- 10 April - World Homoeopathy Day. This day is observed to commemorate the birth anniversary of the founder of Homoeopathy, Christian Fredrich Samuel Hahnemann.
- April 12 - International Day of Human Space Flight (first observed in 2011, On April 12, 1961, the first human space flight was carried out by Yuri Gagarin)
- April 21 - World Creativity and Innovation Day
- April 24 - International Day of Multilateralism and Diplomacy for Peace (first observed in 2019)
- April 25 - World Malaria Day 2020 (Theme ‘Zero malaria starts with me’)
- 31st May: World No Tobacco Day (Theme 2020: #TobaccoExposed)
- 8th June: World Oceans Day (Theme 2020: Innovation for a Sustainable Ocean)
- June 13: International Albinism Awareness Day 2020 (Theme: "Made to Shine")
- June 19: World Sickle Cell Day:
- 21st June: World Hydrography Day (Theme: Hydrography- Enabling Autonomous Technologies). The International Hydrographic Organization (IHO), Headquarter in Monaco, was founded on 21 June 1921.
- 23 June: United Nations Public Service Day (to highlight the value and virtue of public service to the community)
- 23 June: World Olympic Day 2020:
- August 9- World Tribal Day or International Day of the World Indigenous People (Theme: COVID-19 and indigenous people resilience.)