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Quick Revision Prelims 2017

Part 1 - June, July & August 2016
Part 2 – September, October & November 2016
Part 3 – December 2016, January & February 2017
Part 4 – March, April & May 2017 (would be available by 25th May 2017)
SOCIAL ISSUES

1. Saanjhi Saanjh
   - Under aegis of Ministry of Social Justice & Empowerment.
   - National Newspaper dedicated to Senior Citizen, ‘Saanjhi Saanjh’.
   - This newspaper carries important and useful news pertaining to elderly persons besides inspirational stories. It serves as a bridge between old and new generations.
   - This bilingual newspaper has got 8 pages which will be published from Delhi by Harikrit publishers.

2. Swasthya Raksha Programme
   - Programme launched by the AYUSH Ministry to promote health and health education in villages
   - Initiated through Central Council for Research in Ayurvedic Sciences (CCRAS), Central Council for Research in Unani Medicine (CCRUM), Central Council for Research in Homoeopathy (CCRH) and Central Council for Research in Siddha (CCRS) in selected districts/ villages.
   - Aims:
     - Organize Swasthya Parikshan Camps, Swasthya Rakshan OPDs and Health and Hygiene awareness programme
     - Create awareness about cleanliness of domestic surroundings and environment.
     - Provide medical aid and incidental support in the adopted villages and colonies.
     - Document demographic information, hygiene conditions, food habits, seasons, lifestyle etc., incidence and prevalence of disease and their relation to the incidence of disease.
     - Assess health status and propagation of Ayurvedic concept of pathya-apathy and extension of health care services.

3. ‘100 Million for 100 Million’ Campaign
   - The ‘100 Million for 100 Million’ Campaign aims to mobilise 100 million youth and children for 100 million underprivileged children across the world, to end child labour, child slavery, violence against children and promote the right of every child to be safe, free, and educated, over the next 5 years.
   - The campaign was conceptualized by Nobel peace prize winner Kailash Satyarthi and was organized by the Kailash Satyarthi Children’s Foundation.

4. Indian Institute of Skills at Kanpur, Uttar Pradesh.
   - It is conceptualised by PM Modi.
   - The institute opened by the Skill Development Ministry in partnership with the Institute of Technical Education, Singapore. The Union ministry plans to set up six such institutes across the country.
   - Kaushal Pradarshani (Skill Exhibition) for the youth showcasing state-of-the-art vocational training practices of various sectors.
   - MSDE plans to open one Pradhan Mantri Kaushal Kendra (PMKK) in each district of the country to create career opportunities for the youth.
5. **NITI Aayog launches the National Index for Performance on Health Outcomes**
   - The index is launched along with Ministry of Health and Family Welfare.
   - This initiative (launch of ‘Performance on Health Outcomes’ index) is envisioned to bring about the improvements in the social sector outcomes and propel action in the states to improve health outcomes and improve data collection systems.
   - It captures the annual incremental improvements by states rather than focus on historical achievements.

6. **Swachh Swasth Sarvatra launched**
   - An inter-ministerial joint initiative between the Ministry of Drinking Water and Sanitation and the Ministry of Health and Family Welfare.
   - The objective of the initiative aimed at strengthening health centres in open defecation-free blocks.
   - It is build on achievements of two complementary programmes – Swachh Bharat Mission (SBM) and Kayakalp – of the Ministry of Drinking Water and Sanitation and Ministry of Health and family welfare, respectively. Under this initiative:
     - Ministry of Drinking Water and Sanitation has declared over 700 blocks as Open Defecation Free (ODF). Community Health Centres (CHCs) in ODF blocks of the country will be allocated Rs 10 lakhs under National Health Mission (NHM) to focus on sanitation and hygiene.
     - Under Kayakalp, one Primary Health Centre (PHCs) in each district is awarded for meeting quality standards including sanitation and hygiene.
   - Swachh Bharat focusses on mindset and behaviour change campaign. That is an educated children will be the best agents to spread the message of sanitation to their parents.

7. **Delhi declared free of bird flu**
   - The Capital has been declared free from H5N8 avian influenza.
   - Other strains of bird flu are: H5N1, H7N9
   - There is no commercially available vaccine for humans against bird flu strains.
   - Virus repositories are birds.

8. **Women Entrepreneur Council**
   - The Ministry of Women and Child Development has proposed the setting up of a Women’s Entrepreneurship Council for taking up with the government the problems faced by businesswomen.
   - The strong advisory council modelled on the lines of chambers of commerce, will seek to resolve issues through policy changes.
• The council will emerge from the Ministry’s online platform called 'E-Mahila Haat' launched to promote women entrepreneurship.
• Women will be voted on the website and the districts or states with highest votes will form the council.

9. Measles-rubella vaccine
• Health Ministry launches Measles Rubella (MR) a single vaccine campaign for dual protection against measles and rubella as part of Universal Immunization Programme
• All children aged between 9 months and less than 15 years will be given a single shot of Measles-Rubella (MR) vaccination irrespective of their previous measles/rubella vaccination or disease status.
• MR vaccine will be provided free-of-cost across the states at schools, health facilities and outreach session sites.
• After the completion of the campaign, MR vaccine will be introduced in routine immunization and will replace measles vaccine, given at 9-12 months and 16-24 months of age of child.

10. World's first gender literature fest in Patna
• The world’s first ‘Gender Literature Festival’ will be held in Patna in the second week of April.
• The festival will be organised by Gender Resource Centre of Bihar’s Women Development Corporation.
• The objective of this initiative is to create a platform, to exchange ideas, and to share and learn experiences of renowned people in the field of gender [-based or focussed] literature.

11. Coalition for Epidemic Preparedness Innovations
• India is a key member of the newly formed Coalition for Epidemic Preparedness Innovations (CEPI).
• Headquarter: Norwegian Institute for Public Health, in Oslo.
• The coalition will not focus on diseases that already have sufficient attention, but will be guided by WHO’s R&D blueprint (2016), which lists eleven illnesses to focus on, including Chikungunya, Middle East Respiratory Syndrome (MERS), Crimean-Congo Haemorrhagic fever.

12. UNESCO report on Universal Educational Goals in India
• Global Education Monitoring Report, 2016, UNESCO has claimed that India will be half a century late in achieving its universal education goals in relation to the 2030 deadline for achieving sustainable development goals.
• India will achieve universal primary education by 2050, universal lower secondary education (Grades VI - VIII in case of India) by 2060 and universal upper secondary education (Grades IX-XII in case of India) by 2085.
• Ministry of Human Resource Development not involved in this exercise.
13. Delhi High Court reverses ban on fixed dose combination drugs
- Combination drugs or fixed dose combination (FDC) drugs are those with two or more active pharmaceutical ingredients combined in a fixed dose to form a single drug.
- Eg: A combination of nimesulide and paracetamol that is prescribed as an antipyretic (used to prevent or reduce fever)
- Issue:
  - Health Ministry banned 344 such combination drugs, citing health risks and dangerous side-effects and that many of these combinations do not have any advantage over the individual drugs.
  - Kokate Committee — set up to examine these drugs — which recommended the ban.
- Judgement:
  - The court found that the government failed to consult statutory authorities like the Drug Testing Advisory Board (highest statutory decision-making body under the Union Health ministry on technical matters. It is constituted as per the Drugs and Cosmetics Act, 1940) and the Drugs Consultative Committee for the ban.
  - The court also recorded that the Central Drugs Standard Control Organisation was not a statutory authority.

14. 7th World Ayurveda Congress held in Kolkata
- The event was organized by the World Ayurveda Foundation with support of Ministry of AYUSH, and the State government of West Bengal.
- AROGYA Expo is also organised to showcase the best that Ayurveda sector has to offer in products and services to the society.
- Focus — ‘Strengthening the Ayurveda Ecosystem’.
- A Buyer Seller Meet in which 50 foreign buyers have been invited at the behest of PHARMEXCIL and Ministry of Commerce & Industry.

15. Stanpan Suraksha app launched to promote breastfeeding
- App developed for promoting breastfeeding and baby food promotion reporting mechanism.
- The mobile application has been developed by the Breastfeeding Promotion Network of India (BPNI).
- Breastfeeding practices are undermining in the country, out of 79% institutional deliveries only 45% given breastmilk in the first hour. To address this problem Union Government had launched MAA (Mothers Absolute Affection) programme. It aims to enhance optimal breastfeeding practices.

16. Researchers develop first Chikungunya Vaccine
- Chikungunya is a mosquito-borne virus that causes a disease. It is transmitted by Aedes aegypti and Aedes albopictus mosquitoes.
• US Researchers have developed the **first vaccine for chikungunya** fever made from an insect-specific **EILAT virus** that doesn’t have any effect on people, making the vaccine safe and effective.

• The Eilat/Chikungunya vaccine was structurally identical to natural chikungunya virus. The difference is that the hybrid virus replicates very well in mosquito cells, it cannot replicate in mammals.

17. India suffers from huge gender pay gap: ILO Report

• **International Labour Organisation** released **Global Wage Report 2016-17** had found that India suffers from huge gender pay gap.

• It shows that **India** has among the worst levels of gender wage disparity (men earning more than women in similar jobs) with the **gap exceeding 30%**.

• **Singapore** has among the **lowest** gender wage disparity at 3%. Among major economies, **South Korea** only fared worse than **India**, with a gap of 37%.


• Celebrated every year by the United Nations General Assembly, since 1950.

• On this day United Nations General Assembly adopted the **Universal Declaration of Human Rights**.

19. Government to launch prevention, screening and control programme for 5 non-communicable diseases

• LAunched by Ministry Of Health

• Non-Communicable diseases (NCDs) are **Cardiovascular Diseases (CVDs)** such as heart attacks and stroke, Diabetes, **Chronic Respiratory Diseases** (Chronic Obstructive Pulmonary Diseases and Asthma) and Cancer.

• Account for over 60% of all mortality in India.

• As part of the National Health Mission, the **five NCDS include hypertension, diabetes, and cancers of oral cavity, breast and cervix**.

• Training to ASHAs and ANM workers regarding these NCDs and collecting information on major risk factors involved, so that counselling can be done before onset of diseases.


• **National Action Plan for Children, 2016 released by Ministry of Women and Child Development.**

• The Action Plan has four key priority areas; **survival, health and nutrition; education and development; protection and participation.**

• The NPAC defines objectives and indicators for measuring progress under the key priority areas and also identifies key stakeholders for the implementation of different strategies.

• The plan focuses on new and emerging concerns for children such as online child abuse, children affected by natural and man-made disasters and climate change, etc.

• The strategies and action points largely draw upon the existing programmes of various Ministries. However, for new and emerging issues related to children; it suggests formulation of new programmes as required.
• The plan takes into account the Sustainable Development Goals (SDGs) and provides a roadmap towards achieving them.

The National Policy for Children (2013) provides for formation of a National Coordination and Action Group (NCAG) under the Ministry of Women and Child Development to coordinate and implement the plan and monitor the progress with other Ministries concerned as its members.

21. Genetically Modified mosquito trials launched to control dengue, chikungunya and zika
• To check the efficiency of genetically modified mosquitoes in suppressing wild female *Aedes aegypti* mosquito an outdoor caged trial launched in Dawalwadi, Badnapur, in Maharashtra’s Jalna district.
• Aedes aegypti transmit dengue, chikungunya and Zika.
• The trials are conducted by Oxitec and use the Release of Insects carrying Dominant Lethal genes (RIDL) technology.
• Oxitec’s technology uses GM male *Aedes aegypti* mosquitoes that carry a dominant lethal gene. This gene is passed on to offspring after mating of male GM mosquitoes with wild female mosquitoes.
• The lethal gene in the offspring kills the larvae before they reach adulthood.
• Since male mosquitoes do not bite humans, the release of these GM mosquitoes will not increase the risk of dengue, chikungunya and Zika.
• Oxitec’s mosquitoes were first released in Brazil where they have successfully reduced the local populations of mosquitoes by more than 90%, whereas insecticides only affect 30%.
• **Advantages**: most eco-friendly, as it only targets a specific mosquito strain and does not produce any toxic compounds. It has 99% efficiency to kill offspring.

22. Sparsh Leprosy Awareness Campaign
• The Union Government has launched “Sparsh Leprosy Awareness Campaign (SLAC)” on the occasion of Anti-Leprosy Day (observed on the last Sunday of January).
• The day is observed every year on January 30 in the memory of Mahatma Gandhi to remember his selfless efforts and care for the people affected with Leprosy.
• Leprosy is a chronic infectious disease caused by *Mycobacterium leprae* and it affects the skin and peripheral nerves. The mode of transmission of leprosy is still not known.
• **Advantages**: most eco-friendly, as it only targets a specific mosquito strain and does not produce any toxic compounds. It has 99% efficiency to kill offspring.

23. Government clarifies Beti Bachao Beti Padhao has no provision for cash transfer component
• The scheme has **no provision for individual CASH TRANSFER COMPONENT** by Ministry of women & child development.
• The **scheme focuses** on challenging mindsets and deep rooted patriarchy in the societal system, strict enforcement of PC&PNDT Act, advancing education of the girl child: focus is on issues of women empowerment on a life cycle continuum.
• It **is not a DBT** (Direct Benefit Transfer) scheme and any cash incentive under this is a fraud.

24. **Anushka Sharma and Shilpa Shetty appointed as ambassador of Swachh Bharat campaign**
• They will feature in TV and radio campaigns aimed at discouraging people from littering on roads.
• Anushka will highlight the women-centric aspects of open defecation in rural and semi-rural area.

25. **Mahila Shakti Kendra will be set-up at village level: Budget**
• Mahila Shakti Kendra will be set-up at village level with an allocation of Rs. 500 crores in 14 lakh ICDS Anganwadi Centres.
• This will provide **one stop convergent support services** for empowering rural women with opportunities for skill development, employment, digital literacy, health and nutrition.
• Financial assistance of Rs. 6,000 to each pregnant woman will be transferred directly to the bank accounts who undergo institutional delivery and vaccinate their children.

26. **Neeti Mohan collaborates with UN for women empowerment**
• Indian singer Neeti Mohan’s composition "**Udne de**" is a tribute to all women and in support of gender equality.
• It will be part of an **album for United Nations Voluntary Trust Fund project titled 'Music To Inspire - Artists United Against Human Trafficking'**.
• **United Nations Voluntary Trust Fund** is for Victims of Trafficking in Persons, managed by the UNODC (United Nations Office on Drugs and Crime).
• This is a **collective fight by the music community** to make a social statement and end human trafficking

27. **HRD ministry to set up NTA to conduct exams for higher, secondary education**
• HRD Ministry will soon set up a department – **National Testing Agency (NTA) to conduct examinations for higher and secondary education**.
• NTA will be the **single authority that will conduct entrance tests for all higher institutions** like JEE, NEET, NET and other prestigious exams.
• NTA will free CBSE, AICTE and other agencies from conducting various exams and enable them to focus on their core areas and work on improving the quality of education. Its main purpose is to bring reforms in the education system.
• CBSE conveyed to the HRD Ministry that conducting exams for various government bodies puts a lot of burden on them and stretches its resources.
28. February 10: National Deworming Day

- India is observing its third National Deworming Day in 2017.
- Aims to combat parasitic worm infections among preschool and school kids i.e. 1-19 year age children across India.
- Soil Transmitted Helminths (STH) interfere with nutrients uptake in children; can lead to anaemia, malnourishment and impaired mental and physical development.
- The programme is being implemented through the combined efforts of Department of School Education and Literacy under Ministry of Human Resource and Development, Ministry of Women and Child Development and Ministry of Drinking Water and Sanitation.
- During NDD single dose of Albendazole is administered to children through the platforms of schools and aanganwadi centers.

29. Government launches SAATHIYA Resource Kit and SAATHIYA SALAH mobile app for adolescents

- Ministry of Health and Family Welfare launched ‘SAATHIYA’ Resource Kit and ‘SAATHIYA SALAH’ Mobile App for Adolescents as part of the Rashtriya Kishor Swasthya Karyakram (RKSK) program.
- Aim of the programme is to introduction of the Peer Educators (Saathiyas) who act as a catalyst for generating demand for the adolescent health services and imparting age appropriate knowledge on key adolescent health issues to their peer groups.
- The Resource Kit has been developed by United Nations Population Fund (UNFPA) and Population Foundation of India (PFI).
- The mobile app ‘Saathiya Salah’ acts as cost-effective information platform for the adolescents. It also has feature of toll-free Saathiya Helpline which will act as an e-counselor.
- Rashtriya Kishor Swasthya Karyakram (RKSK) programme was launched in 2014 with an aim to cater and address health and development needs of the country’s adolescents.
- It identifies six strategic priorities for adolescents: (i) nutrition, (ii) sexual and reproductive health (SRH), (iii) non-communicable diseases (NCDs), (iv) substance misuse, (v) injuries and violence (including gender-based violence) and (vi) mental health.
- The strategy focuses on age groups 10-14 years and 15-19 years with universal coverage. It covers males and females in school and out of school, in urban and rural, married and unmarried and vulnerable and under-served.

30. FSSAI unveils Food Fortification Logo

- The Food Safety and Standards Authority of India (FSSAI), which is addressing the nutritional gap in the population through fortification of various foods.
- FSSAI has unveiled a Logo for fortified foods which may
be used by food businesses.

- This Logo comprises of a square encompassing an F with a ‘+’ sign with a ring around it which signifies the addition of extra nutrition and vitamins to daily meals to provide good health, protection and an active life.
- Food fortification or enrichment is the process of adding micronutrients i.e. essential trace elements and vitamins into the food.
POLITY ISSUES

1. Government approves inclusion of 15 new castes in Central OBC list
   - The National Commission of Backward Classes (NCBC) had recommended a total of 28 changes in respect of 8 states—Assam, Bihar, Himachal Pradesh, Jharkhand, Maharashtra, Madhya Pradesh, Jammu & Kashmir and Uttarakhand.
   - The changes will enable the persons of these castes/communities to avail the benefits of reservation in Government services as well as in Central Educational Institutions. They will also become eligible for benefit under the various welfare schemes, scholarships etc.
   - NCBC examines requests for inclusion of any class of citizens as a backward class in the lists and hear complaints of over-inclusion or under-inclusion of any backward class in such lists. Its advice is binding upon the Central Government.
   - This commission was created under the National Commission for Backward Classes Act, 1993 in the aftermath of Mandal Case (1992) judgement.
   - NCBC is made of a chairman, a social scientist, two persons having special knowledge in matters of backward classes and a member secretary.
   - The Commission presents an annual report to the Central Government. The Central Government places the report before each House of Parliament, along with a memorandum explaining the action taken on the advice tendered by the Commission.

2. The Rajasthan High Court struck down Special Backward Classes reservation given to Gujjars and five other communities of the state.
   - A division bench of justices M N Bhandari and J K Ranka of Rajasthan High Court held that the special reservation beyond the permissible limit of 50 per cent cannot be made.
   - It held that the report of the OBC Commission of the state was calculated one to favour these communities.
   - On November 28, 2012, the Rajasthan Cabinet decided to provide a separate five per cent quota to the SBCs without touching the 21 per cent reservation available to Other Backward Classes.
   - The community, currently enjoying OBC status, had initially demanded its inclusion in the Scheduled Tribes and was later persuaded to accept the creation of a new reserved category for it.

3. Union Ministry of Tribal Affairs in collaboration with UNDP and National Scheduled Tribes Finance and Development Corporation (NSTFDC) launched “Vanjeevan” the National Resource Centre for Tribal Livelihood issues at Bhubaneswar, Odisha.
   - Vanjeevan will be a programme to identify the problems in livelihood issues in select districts of six states of Assam, Gujarat, Madhya Pradesh, Rajasthan, Odisha and Telangana, having low HDI of tribal people in the first phase.
   - The programme will focus on the identification of local resources, keeping in view the existing skill level, facilitate utilization of funds under various Government programmes for the above purpose.
National Resource Centre will serve as a platform for livelihood mapping, skill gap analysis and knowledge hub where consolidation of best livelihood and entrepreneurship models will be accessible for tribal entrepreneurship development. In the second phase the programme will be implemented in the states of Arunachal Pradesh, Chhattisgarh, Jharkhand, Maharashtra, Meghalaya and Tripura.

   - The number of categories of differently-abled has also been increased from 7 to 21 so that they can avail the profits of various schemes.
   - The revision to the Disability Bill recognises acid attacks and Parkinson's disease as disabilities.
   - It also makes sure that the people with disabilities are provided with barrier-free access in buildings, transport systems and all kinds of public infrastructure.
   - The Disabilities Bill also aims to reserve seats for differently-abled from 3 per cent to 4 per cent and promises 5 per cent reservation for persons with benchmark disabilities.

5. Union Government reconstitutes committee helping Krishna River Board
   - The Union Water Resources Ministry has reconstituted a committee that was tasked with assisting the Krishna River Management Board (KRMB).
   - The new committee will be headed by A.K. Bajaj, former chairman of the Central Water Commission (CWC). Besides, Gopala Krishnan, R.P. Pandey, Pradeep Kumar Shukla and N.N. Rai will be its members.
   - The terms of reference include: Assisting KRMB to prepare a manual on how projects, common to Andhra Pradesh and Telangana, ought to be handled and Decide how the Godavari waters ought to be transferred to the Krishna Basin in accordance with the Godavari Water Disputes Tribunal Award.
   - The committee was reconstituted based on the demand of Telangana government after it had opposed the earlier Mohile committee's recommendation considering it as one-sided and biased against Telangana.

6. President Promulgates Payment of Wages Act (Amendment) Ordinance, 2016
   - Through the ordinance, Section 6 of the Payment of Wages Act has been amended and would enable an employer to pay wages by crediting it into the bank account of the employee.
   - Earlier, wages were to be paid in current coin or currency notes or in both, and without obtaining a written authorisation of the employee, the employer could not have paid it by cheque or by crediting it in his bank account.
   - Now, the employer need not obtain any consent from the employee to pay the wages in cheque or by crediting in his bank account. Further the government can make it mandatory for the employer to pay it by the way of cheque or by crediting in employee’s account.
7. Constitution of high level committee to review Institutionalization of Arbitration Mechanism in India
   - The Union Ministry of Law and Justice has constituted a High Level Committee (HLC) to be Headed by Justice B N Srikrishna to review institutionalisation of arbitration mechanism in India. It will look into various factors to accelerate arbitration mechanism and strengthen the arbitration ecosystem in the country.
   - The Arbitration and Conciliation (Amendment) Act, 2015 envisages quick enforcement of contracts, easy recovery of monetary claims, reduce the pendency of cases in courts and hasten the process of dispute resolution through arbitration.
   - Its terms of reference include reviewing present mechanism, ADR (alternative Dispute Resolution) Assess skill gaps in ADR and allied institutions, etc. The committee will submit its report within 90 days.

   - Former Olympic champion Abhinav Bindra, badminton player Prakash Padukone and athlete Anju Bobby George are a part of the nine-member government panel formed to make recommendations for bringing out a comprehensive National Sports Development Code across all disciplines.
   - The committee will be headed by Sports Secretary Injeti Srinivas and will study issues related to sports governance, including court judgments and best international practices.
   - The Committee will study the existing sports governance framework, issues relating to sports governance in the country, including court judgments & international best practices and make recommendations on bringing out a comprehensive National Sports Development Code across sports disciplines.

9. AADHAR must for MNREGA work
   - From April 1, 2017, workers in rural areas enrolled under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) must have an Aadhaar card.
   - However, till an Aadhaar card is obtained, ration card, driving licence, voter identity card, Kisan passbook with photo, job card issued under the MGNREGS and a certificate issued by a gazetted officer or a tehsildar will be admissible as proof of identity to get the benefits.
   - The government has invoked Section 7 of the Aadhaar Act, 2016, which mandates that when the government gives subsidy, benefit or service from the Consolidated Fund of India (CFI), an individual can be asked to undergo authentication or furnish proof of possession of Aadhaar.
   - The Employees’ Provident Fund Organisation has also made it mandatory for 50 lakh pensioners and four crore subscribers to provide either the Aadhaar number or proof that they have applied for it.
10. SC wants paper trail in EVMs for fair poll
   - This is the second time the Supreme Court has directed Election Commission (EC) for the implementation of Vote Verifier Paper Audit Trail (VVPAT) in electronic voting machines (EVMs) to ensure 100 per cent transparency in elections.
   - In the VVPAT system, when a voter presses the button for a candidate of his choice in the electronic voting machines (EVM), a paper ballot containing the serial number, name of the candidate and poll symbol will be printed for the voter.
   - It is intended as an independent verification system for EVM designed to (i) allow voters to verify that their votes are casted correctly, (ii) detect possible election fraud or malfunction and (iii) provide a means to audit the stored electronic results.

11. Discussion to move water into the concurrent List
   - The Union ministry for water resources, river development and Ganga rejuvenation has begun the process to make water a part of the concurrent list, moving it away from being a state subject.
   - There has been a rise in conflicts among states over access to water. While Maharashtra, Andhra Pradesh and Karnataka are fighting over Krishna river, Tamil Nadu, Karnataka, Kerala and Pondicherry are in a fight over Cauvery river. Punjab and Haryana are also in conflict over Sutlej-Yamuna.
   - According to the Constitution of India, as most of the rivers in the country are inter-state, the regulation and development of water of these rivers is a source of inter-state differences and disputes and is included in the state list.
   - Water supplies, irrigation and canals, drainage and embankments and storage fall in the state list.

12. Goa became the first State to send Postal Ballots via Electronic mode.
   - This facility allows service voters (who are either in the defence, para-military forces or on diplomatic missions) to download the postal vote, cast their vote and send it via e-mail to returning officer.
   - Goa also became the first state in the country to use Voter-Verified Paper Audit Trail (VVPAT) machines in all assembly constituencies.

13. Karnataka government to amend law for conducting kambala.
   - Kambala is an annual traditional Buffalo Race (he-buffalo) held in coastal districts of Karnataka to entertain rural people of the area. Slushy/marshy paddy field track is used for Kambala.
   - The contest generally takes place between two pairs of buffaloes, each pair race in two separate wet rice fields’ tracks, controlled by a whip-lashing farmer.
   - The Karnataka government has brought an amendment to the Prevention of Cruelty to Animals Act (PCA), 1960 for conducting traditional sports of Kambala and bull-cart race in the State.
14. Committee led by former CAG Vinod Rai to run BCCI
   - The Supreme Court has appointed former Comptroller and Auditor General (CAG) Vinod Rai as head of four-member Committee of Administrators to run Board of Control for Cricket in India (BCCI).
   - The panel, which will be chaired by Vinod Rai, the former Comptroller and Auditor General of India, consists of Ramachandra Guha, the historian and cricket writer, Diana Edulji, the former India women's captain, and Vikram Limaye, managing director and CEO of IDFC (Infrastructure Development Finance Corporation).

15. Mysuru gets India’s 1st post office passport Kendra
   - Mysuru got India's first Post Office Passport Seva Kendra (POPSK), which will offer all passport related services on the lines of PSKs.
   - It has been named as POPSK because the ministry of external affairs (MEA) has tied up with the postal department to offer passport related services through a network of post offices.
   - Except printing and dispatch of passports, the POPSK will carry out all other operations like receiving an application, document verification and fee collection from applicants and facilitating further process by sending it to the regional passport office in Bengaluru.

16. Union Cabinet gives nod to amend Constitution (Scheduled Castes) Order, 1950
   - The Union Cabinet had approved the amendments in the Constitution (Scheduled Castes) Order, 1950 to modify the list of SC in Odisha.
   - It also approved amending the Constitution (Pondicherry) Scheduled Castes Order, 1964 to change the name of the Union territory to Puducherry from Pondicherry.
   - Under the provision of Article 341, first list of SCs in relation to a states/UT is to be issued by a notified Order of the President after consulting concerned state Government.
   - But the clause (2) of Article 341 envisages that, any subsequent inclusion in or exclusion from the list of Scheduled Castes can be effected through an Act of Parliament.

17. Government Frames National Transit Oriented Development Policy
   - To address the growing problems of pollution, congestion and shortage of housing stock for the poor and middle class in Delhi, the Ministry of Urban Development has approved the Transit Oriented Development Policy (TOD) for Delhi.
   - TOD is a key policy initiative for low-carbon, high-density, compact, mixed land use and sustainable development by minimizing travel time for citizens, promoting use of public transport, reducing pollution and congestion, creating more homogeneous neighborhoods, having work places near residences, creating public amenities within walking distances and providing safe environment through redevelopment along MRTS.
18. CCEA approves $854.4 million investment for 900-MW Arun 3 hydropower project in Nepal.

- The project is located on Arun River, a transboundary river and a tributary of Kosi, in Sankhuwasabha district of eastern Nepal. Satluj Jal Vidyut Nigam (SJVN) Limited had bagged the project through International Competitive Bidding.
- The project is based on Run-of-River scheme that envisages about 70 metre high concrete gravity dam and 74 Km Head Race Tunnel (HRT).
- The Project Development Agreement (PDA) provides 21.9% free power to Nepal for the entire concession period of 25 years. The surplus power from the project will be exported to India from Dhalkebar in Nepal to Muzaffarpur in Bihar.

19. SC introduces Middle Income Group Scheme.

- The Supreme Court has introduced Middle Income Group Scheme, (MIGS) a self-supporting scheme for providing legal services to the middle and relatively lower income groups.
- MIGS is a self-supporting scheme that will provide legal services to the middle income group citizens whose gross income does not exceed Rs. 60,000 per month or Rs. 7.5 lakhs per annum.
- A case will be registered under the MIG Legal Aid Scheme and forwarded to Advocate-on-Record/Senior Counsel/Arguing Counsel on the panel for their opinion.

20. Government Launched the TAMRA portal and Mobile app

- The Ministry of Mines has launched Transparency, Auction Monitoring and Resource Augmentation (TAMRA) Portal and Mobile Application to ensure transparent award of statutory Clearances for mining operation.
- The TAMRA covers block-wise, state-wise and mineral-wise information of mines to be auctioned. It monitors various statutory clearances and also highlights the additional resources generated through e-auction.
- In case of delay in obtaining any statutory clearances, TAMRA platform will send triggers to the concerned authority so that they can take remedial steps immediately.

21. Union Women and Child Development Ministry has announced setting up of compensation fund

- It will provide financial help to children who are victims of sexual crimes under POCSO Act.
- The money for this fund will be drawn from Nirbhaya Fund. Nirbhaya Fund with corpus of Rs. 1000 crores was announced by government for empowerment, safety and security of women and girl children.
- Protection of Children from Sexual Offences (POCSO) Act was formulated in 2012 to address sexual abuse and sexual exploitation of children.
Government Schemes

1. VISAKA- Vittiya Saksharta Abhiyan (Digital Financial Literacy Campaign)
   - A campaign launched by the Ministry of Human Resource Development (MHRD) to promote a digital economy through youth volunteers across India.
   - The purpose is to actively engage the youth / students /Higher Education Institutions to receive nothing in cash (fee/fines/deposits) and pay nothing in cash (wages/salaries/vendor payments) and develop a cashless campus (covering shops/canteens/services) and motivate all to use a digitally enabled cashless economic system for transfer of funds.

2. Nai Roshni Scheme
   - Under Ministry of Minority Affairs.
   - Scheme for leadership development of Minority Women.
   - The scheme aims to empower and instil confidence among minority women by providing knowledge, tools and techniques for interacting with Government systems, Banks and other institutions at all levels.
   - Implemented through selected Non-Governmental Organizations (NGOs) all over the country.

3. Pravasi Kaushal Vikas Yojana
   - Skill development programmes targeted at the Indian youth by providing training and certify Indians seeking overseas employment.
   - It was launched in 14th Pravasi Bhartiya Divas convention at Bengaluru, Karnataka. Portuguese Prime Minister Antonio Costa was the Chief Guest of the event.
   - It will be implemented by the National Skill Development Corporation (NSDC) through its training partners and in consultation with the Union Ministry of External Affairs and the Union Skill Development Ministry.

4. World’s Largest Street Light Replacement Programme to the Nation
   - Ministry of Power, had dedicated the Street Lighting National Programme (SLNP), in the South Delhi Municipal Corporation (SDMC) area as the World’s Largest Street Light Replacement Programme.
   - Implemented by the Energy Efficiency Services Limited (EESL).
   - EESL replaces the conventional street lights with LEDs at its own costs and consequent reduction in energy and maintenance cost of the municipality is used to repay EESL over a period of time.

**SLNP scheme**- A National Programme to convert conventional street and domestic lights with energy efficient LED lights in 100 cities.

The main objective is to promote efficient lighting, enhance awareness on using efficient equipment which reduce electricity bills and help preserve environment.
5. Deen Dayal Upadhyaya Antyodaya Yojana’- DAY
- Scheme for uplift of urban and rural poor through enhancement of livelihood opportunities through skill development and other means.
- September 25: Antyodaya Diwas
- Under:
  - Urban: Ministry of Housing & Urban Poverty Alleviation (HUPA), starts from 2016
  - Rural: Rural Development Ministry starts from 2014 itself.

Rural Deen Dyal Scheme: National Rural Livelihood Mission
- NRLM renamed to Aajeevika and then again renamed as Deen Dayal scheme.
- Deen Dayal Upadhyaya Grameen Kaushalya Yojana is a subcomponent for skill Development
  - Train 10 lakh rural youth in 3 years by 2017 (15 years age and above).

Urban Deen Dyal Scheme
- Deen Dayal Upadhyay Antyodaya Yojana (DAY)
- Skilling urban poor with 6 pillar program
  - City livelihood centres
  - Train 5 lakh urban poor per year from 2016, spending Rs.15k-18k on each of them
  - Urban Self Help Groups (SHG) with Rs.10,000 to each.
  - Vendor markets + skill training to vendors
  - Permanent shelters for urban homeless + other essential services.
  - Help poors setup enterprises. Give them loan At 7% interest rate

6. Cabinet approves New Scheme for promotion of Rural Housing
- The Government would provide interest subsidy under the scheme.
- Interest subsidy would be available to every rural household who is NOT covered under the Pradhan Mantri Aawas Yojana (Grameen), PMAY(G).
- The scheme would enable people to construct new houses or add to their existing pucca houses to improve their dwelling units.
- The beneficiary who takes a loan under the scheme would be provided interest subsidy for loan amount upto Rs. 2 Lakhs.
- National Housing Bank would implement the scheme.

7. Union Cabinet approves Varishtha Pension Bima Yojana 2017
- It is a part of Government’s commitment for financial inclusion and social security.
- The scheme will be implemented through Life Insurance Corporation of India (LIC) during the current financial year to provide social security during old age and protect elderly persons aged 60 years and above against a future fall in their interest income due to uncertain market conditions.
The scheme will provide an assured pension based on a guaranteed rate of return of 8% per annum for ten years.

The differential return, i.e., the difference between the return generated by LIC and the assured return of 8% per annum would be borne by Government of India as subsidy on an annual basis.

8. **TOP Scheme: Target Olympic Podium Scheme**
The TOP Scheme was formulated by the Union Ministry of Youth Affairs and Sports within the overall ambit of National Sports Development Fund (NSDF).

- The objective of scheme is to identify and support potential players having medal prospects for 2020 and 2024 Olympic Games.
- Under the scheme selected athletes will be provided financial assistance for their customized training at Institutes having world class facilities and other necessary support. Benchmark for selection of athletes under the scheme will be in relation to international standards.
- The committee headed by Abhinav Bindra along with other members had awarded assistance to as many as 106 players.

<table>
<thead>
<tr>
<th>Athletes from the following disciplines come under the scheme:</th>
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<tbody>
<tr>
<td>1. Athletics (19 athletes) (Athletes for 4x400 Women's Relay Team and Race Walking Team are yet to be identified)</td>
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<td>2. Archery (16 archers) (yet to be identified)</td>
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<tr>
<td>3. Badminton (6 Players)</td>
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<td>4. Boxing (8 boxers)</td>
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<td>5. Shooting (17 shooters)</td>
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<tr>
<td>6. Wrestling (7 wrestlers)</td>
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<td>7. Yachting (2 sailors)</td>
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Economy Issues

1. Public Financial Management System (PFMS)
   - Why in news?
     There are about Rs.1-1.5 lakh crore of idle funds lying with the government. Now, if the government can access these funds through PFMS, it **need not borrow that amount**. At 7% interest, that works out to a saving in interest costs of at least Rs.7,000 crore.
   - PFMS, is a **web based application** administered by the **department of expenditure**. It is an end-to-end solution for processing payments, tracking, monitoring, accounting, reconciliation and reporting.
   - The PFMS platform compiles, collates and makes available in real-time, information regarding all government schemes, and, significantly, provides the government real-time information on resource availability and utilisation across schemes.
   - The platform will also allow government expenditure to adopt a Just-in-Time (JIT) approach, with payments made only when they are needed.
   - Later it will be integrated with IT network of the GST.

2. Ratan Watal Committee for Digital Payments
   - The Committee on Digital Payments headed by **Ratan P. Watal** has submitted its final report to the Union Finance Ministry.

   **WHAT THE WATAL PANEL HAS RECOMMENDED**
   - The setting up of a separate, more independent payments regulator within the RBI framework.
   - Revisiting the Payment and Settlements Act to include clauses on consumer protection, data security and privacy.
   - A more prominent role for Aadhaar, including its usage for primary identification.
   - Operation of RTGS and NEFT on a 24x7 basis, allowing non-bank payment service providers to directly access the payment systems.
   - Interoperability between banks and payment service providers based on mobile number and Aadhaar.
   - Systemically important payment service providers to be regulated by RBI.
   - Creating a fund to promote digital transactions.
   - All government payments to be made digitally, waiver of transaction fees and charges.
   - Cash-handling charges to be levied by government and merchants to disincentivize use of cash.

3. Indian Enterprise Development Service (IEDS)
   - Government approved the creation of the **Indian Enterprise Development Services (IEDS)** in the **Office of Development Commissioner, Ministry of Micro, Small and Medium Enterprises**.
   - The service has been created by absorbing 11 trades, recruitment to which had been done differently following different rules.
   - The creation of the new cadre and change in structure will strengthen the organisation, and will help to achieve the vision of Startup India, Stand-up India and Make in India.
The measure will enhance the capacity and efficiency of the organisation and also help in achieving growth in the MSME sector through a focussed and dedicated cadre of technical officers.

4. Coal Mitra
- ‘Coal Mitra’ is a Web portal for flexibility in utilization of domestic coal.
- The Coal Mitra Web Portal has been designed to bring about flexibility in Utilization of Domestic Coal by transferring the reserves to more cost efficient State/Centre owned or Private sector generating stations, leading to lower generation costs and ultimately lesser cost of electricity for the consumers.
- With this the Government has also allowed coal swapping between PSUs and the private sector.
- This portal will enhance transparency in coal swapping and help reduce operational and logistic costs bringing tariffs down.

5. Market stabilisation scheme (MSS) bonds
- The central bank decided to issue market stabilisation scheme (MSS) bonds to manage the excess liquidity that has resulted due to demonetisation.
- What are MSS bonds?
  These are special bonds floated on behalf of the government by the RBI for the specific purpose of mopping up the excess liquidity in the system when regular government bonds prove inadequate.
  These are mostly shorter-tenure bonds, of less than six months maturity. But the tenure differs depending on the requirement.
- RBI chosen to issue MSS bonds because of the sudden surge in deposits due to the surrender of demonetised currency notes in large quantities. It skewed bond yields and interest rates, disrupting the functioning of the market. To impound the excess liquidity, MSS bonds were a better option than a hike in CRR holdings.
- How MSS bond is different from CRR?

<table>
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<tr>
<th>CRR</th>
<th>MSS Bond</th>
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<tr>
<td>CRR is perceived to be a blunt instrument with an immediate impact on liquidity . It does not fetch any return for the depositing bank.</td>
<td>MSS bonds earn a return and qualify for statutory liquidity ratio, or SLR, that banks need to maintain in the form of short-tenured treasury bills and government bonds. MSS bonds, too, are raised through an auction and are tradable in the secondary market.</td>
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• How are MSS bonds different from regular government bonds?
The regular government bonds are part of the government's borrowing programme and the interest payout on these has an impact on the fiscal position.

The MSS bills and securities are matched by an equivalent cash balance held by the government with the Reserve Bank. Hence, they have only a marginal impact on the government's revenue and fiscal positions. The cost of such interest payment is shown separately in the Budget.

- **Has this instrument been used in the past?**

  The Reserve Bank first introduced MSS bonds in February 2004 when the country was flushed with dollar inflows, which needed to be converted into the rupee. This created huge surplus liquidity in the system and the RBI decided to impound it by issuing MSS bonds as the central bank was running out of stock of regular government bonds.

### 6. UPI based mobile payment app - BHIM

- BHIM is a digital payments solution app based on the Unified Payments Interface (UPI) from the National Payments Corporation of India (NPCI), the umbrella organisation for all retail payments systems in India.
- The app allows easily transferring money or making a payment from bank account using only phone number. It can work even on basic phones as it supports USSD(Unstructured Supplementary Service Data) payments.
- It has mobile wallet facility in which money can be loaded. Using it anyone can directly connect their phone to bank account like a debit card.
- The app allows user to scan a QR code. The merchant can also generate his QR code through the app. Payment can be done through scanning QR code.
- Merchants can also use the BHIM app to receive money from a smartphone or Aadhaar Pay if customer has linked a bank account and Aadhaar ID.
- All major UPI connected Indian banks accepts money through BHIM app. Even banks not connected to UPI can receive money through BHIM through IFSC assigned to banks.

### 7. GARV-II App to track Rural Household Electrification

- To ensure transparency in implementation of rural electrification programme, the Power Ministry launched a new app, GARV-II, to provide real time data of all six lakh villages of the country.
The GARV-II will enable the commoners to participate in the development work and can give their input about rural electrification programme.

**Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**
1. The DDUGJY is one of the flagship programs of rural electrification of the Ministry of Power and will facilitate 24x7 supply of power.
2. It focuses on feeder separation (rural households & agricultural) and strengthening of sub-transmission & distribution infrastructure including metering at all levels in rural areas.
3. The earlier scheme for rural electrification viz. Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) has been subsumed in the new scheme as its **rural electrification component**.
4. The major components of the scheme are -
   - Feeder separation;
   - Strengthening of sub-transmission and distribution network;
   - Metering at all levels (input points, feeders and distribution transformers);
   - Micro grid and off grid distribution network & Rural electrification

- Under this facility, village-wise, habitation-wise base line data on household electrification for all states provided by them has been incorporated.
- Village-wise works sanctioned under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) have also been mapped to monitor progress of works in each village.
- The status of release of funds to the states for projects sanctioned under DDUGJY has also been incorporated in ‘GARV-II’.
- GARV-II will have a citizen engagement window ‘SAMVAD’ to enhance participation.

**8. 16th meeting of Financial Stability Development Council (FSDC)**
- The 16th meeting of the Financial Stability and Development Council (FSDC) was held in New Delhi under the chairmanship of Union Finance Minister Arun Jaitley.
- Heads of all financial sector regulators as its members attended this meeting.
- **Objective**-
  - To discuss about the obstacles faced by the economy and to bring out the solution to tackle them.
- **Issue discussed are**-
  1. Measures to eliminate shadow economy and tax evasion
  2. Financial regulators gave suggestions to promote financial stability
  3. Discussed issues relating to Fintech, digital innovations and cyber security
  4. Key issues relating to increase in Non Performing Assets (NPA) in banks
  5. Discussed initiatives to promote financial inclusion / financial literacy

- **About FSDC**
  - The Central Government had established Financial Stability and Development Council (FSDC) in December 2010 with the Finance Minister as it Chairman. The idea to create it was first mooted by the Raghuram Rajan Committee on Financial Sector Reforms in 2008.
It is a super regulatory body for regulating financial sector which is a vital for bringing healthy and efficient financial system in the economy.

The FSAC envisages to strengthen and institutionalise mechanism of (i) maintaining financial stability, (ii) Financial sector development, (iii) inter-regulatory coordination along with monitoring macro-prudential regulation of economy.

9. India ranks 4th in Global Wind Power Installed Capacity Index
   - India has attained the **fourth position** globally in installed wind power capacity after China, U.S. and Germany as per Global Wind Power Installed Capacity Index released by **Global Wind Energy Council**.
   - The cumulative installed wind power generation capacity of India is 25088 MW. The worldwide installed capacity of wind power reached 435 GW by the end of 2015.
   - The cumulative installed wind power generation capacity of China is 145362 MW. The cumulative installed wind power generation capacity of the USA is 74471 MW and that of Germany is 44947 MW.
   - India’s renewable energy sector is undergoing transformation with a target of 175 GW of renewable energy capacity to be reached by 2022.

10. ILO report on unemployment in India
    - Unemployment in India is projected to witness marginal increase between 2017 and 2018, signalling stagnation in job creation in the country, according to a UN labour report.
    - The United Nations International Labour Organisation (ILO) released its 2017 **World Employment and Social Outlook report**, which finds economic growth trends lagging behind employment needs and predicts both rising unemployment and worsening social inequality throughout 2017.
    - Unemployment in India is projected to increase from 17.7 million last year to 17.8 million in 2017 and 18 million next year. In percentage terms, unemployment rate will remain at 3.4 per cent in 2017-18.
    - Manufacturing growth has underpinned India’s recent economic performance, which may help buffer demand for the region’s commodity exporters.
    - The global unemployment rate is expected to rise modestly in 2017, to 5.8 per cent (from 5.7 per cent in 2016).

11. Centre shifts disinvestment advice to new department
    - The government transferred the role of advising the government on how to utilise the proceeds from disinvestment from the **Department of Investment and Public Asset Management (DIPAM)** to the **Department of Economic Affairs**
    - Department of Economic Affairs in the Finance Ministry will now be in charge of financial policy in regard to the utilisation of the proceeds of disinvestment channelized into the **National Investment Fund**.
    - It seems to be streamlining the process because the Department of Economic Affairs is in charge of budget-making, which includes deciding what to do with the proceeds from disinvestment.
• The Centre had created a **National Investment Fund** in 2005 in which the proceeds from the disinvestment of Central Public Sector Enterprises (CPSEs) were to be channelized.

12. **IIP grows at four-year high of 5.7% in November**

• Data released by the statistics office showed that India's factory output, measured by the Index of Industrial Production (IIP) has registered 5.7% growth in November 2016 as against 1.9% in October 2016.

• **About Index of Industrial Production (IIP)**
  The IIP is compiled and published every month by Central Statistics Office (CSO) of the Union Ministry of Statistics and Programme Implementation.
  It covers 682 items comprising Manufacturing (620 items), Mining (61 items) & Electricity (1 item).
  The weights of the three sectors are 75.53%, 14.16%, 10.32% respectively and are on the basis of their share of GDP at factor cost during 2004-05.
  The eight Core Industries comprise nearly 38 % of the weight of items included in IIP.

13. **Google introduces tools for small businesses in India**

• Google launched two new initiatives **My Business Website** and **Digital Unlocked** to train and help small and medium businesses (SMBs) in India capitalise on the digitisation wave faster.

• **Under My Business Websites**, Google will provide free websites and web tools to small businesses in order to bolster their digital presence. This will help SMBs create a free, mobile optimised website.

• **Digital Unlocked**, an education programme in association with industry body FICCI and **Indian School of Business**. The programme will impart mobile and online courses to help small businesses.
  It will provide Indian SMBs essential digital skills to enable them to get online and connect to customers in different parts of the country. The trainings will be certified by Google, Indian School of Business and FICCI.

14. **India 60th in inclusive development index**

• India has been ranked 60th among 79 developing economies, below neighbouring China and Pakistan, in the inclusive development index, according to a **WEF's** (World Economic Forum) '**Inclusive Growth and Development Report 2017**'.
• The Inclusive Development Index (IDI) is based on 12 performance indicators. In order to provide a more complete measure of economic development.
• The Inclusive Development Index has three pillars -- Growth and Development, Inclusion and Intergenerational Equity, and Sustainability.

15. Eight core industries grow 5.6% in December
• Eight core industries register a growth of 5.6 per cent in December 2016 on the back of healthy output recorded by refinery products and steel.
• The growth rate of eight infrastructure sectors -- coal, crude oil, natural gas, refinery products, fertilisers, steel, cement and electricity -- was 2.9 per cent in December 2015.
• The core sectors, which contribute 38 per cent to the total industrial production, expanded 5 per cent in April - December 2016 compared to 2.6 per cent growth in the same period last financial year.
• Refinery products and steel production jumped 6.4% and 14.9%, respectively, during the month under review.
• Crude oil, fertiliser, natural gas and cement output reported contraction. Coal output declined by 4.4% in December 2016 from 5.3% in the same month previous year.
• Electricity generation, too, dipped by 6% as compared with 8.8% in December 2015.

16. India Signs Financing Agreement with World Bank for “Third Technical Education Quality Improvement Programme (TEQIP III)”
• The World Bank has signed an agreement with the government to provide $201.50 million loan for quality engineering education across several states in India.
• The loan agreement is part of the Technical Education Quality Improvement Programme (TEQIP III), which is the third phase of a 15-20 year programme that started in 2002.
• The focus of the project is to strengthen engineering education in India’s low-income, hill states and states of the North East.
• TEQIP III will support affiliating technical universities for the first time, multiplying benefits to all affiliated colleges and not just those being supported individually that will benefit nearly 30 lakh under-graduates and post-graduates.
• TEQIP will impart skill training to labour market entrants more equitably across the country by focusing on states with under-performing engineering education set-up.
17. WTO's trade facilitation agreement comes into effect

- The **Trade Facilitation Agreement** (TFA) in Goods of World Trade Organisation (WTO), which seeks to ease customs norms came into effect with its ratification by two-thirds members of WTO including India.
- The TFA in Goods was adopted by the WTO Members in 2014. It aims to streamline, simplify, standardise and ease customs procedures and norms. It will help to cut trade costs around the world.
- **TFA** was the outcome of WTO’s 9th Bali (Indonesia) ministerial package of 2013.
- The agreement includes provisions for:
  - Abolish hard import quotas
  - Lowering import tariffs and agricultural subsidies
  - Reduction in red tape at international borders

18. Niti Ayog launches ‘India Innovation Index’

- To make India an innovation-driven economy, NITI Aayog, Department of Industrial Policy & Promotion (DIPP) and Confederation of Indian Industry (CII) together launched a mega initiative “India Innovation Index”.
- It will rank states on Innovations through country’s first online innovation index portal that will capture data on innovation from all Indian states on innovation and regularly update it in real time.
- The India Innovation Index Framework will be structured based on the best practices followed in **Global Innovation Index (GII)** indicators and additionally by adding India-centric parameters those truly reflect the Indian innovation ecosystem.

19. Ceta: EU parliament backs free trade deal with Canada

- The European Parliament has approved a landmark free trade deal **Comprehensive Economic and Trade Agreement (Ceta)** with Canada.
- **What is Comprehensive Economic and Trade Agreement (CETA)?**
  
  CETA is a free free-trade agreement (FTA) between Canada and the EC. It aims to revoke roughly 9,000 tariffs, covering many industrial goods and agricultural and food items.
  
  It links single European Union market with Canada, world’s 10th largest economy. It also promises to open up competition and cooperation in the services sector ranging from regulations, to financial services, and telecoms.
  
  It remove customs duties, open-up the services market, end restrictions on access to public contracts, offer predictable conditions for investors and help prevent illegal copying of EU innovations and traditional products.
INTERNATIONAL RELATION ISSUES

1. Kolkata-Mizoram trade route to open via Myanmar
   - A deep water port built in Sittwe in Myanmar on the Bay of Bengal by India is ready to be commissioned.
   - The Indian achievement pips to the post a Chinese endeavour to create a deep-sea berthing infrastructure and an SEZ further down the Rakhine coast at Kyaukphyu.
   - Sittwe is the capital of Rakhine State (which has been in the news for the plight of Rohingya Muslims) in south-western Myanmar. It is located at the mouth of the Kaladan river, which flows into Mizoram in north-eastern India.
   - The strategic advantage would be that it would significantly lower the cost and distance of movement from Kolkata to Mizoram and beyond.

2. Qatar abolishes ‘kafala’ labour system in view of the 2022 Football Worldcup
   - Under “kafala”, all foreign workers working in Qatar require a local sponsor, in the form of an individual or company, and need their permission to switch jobs or leave the country.
   - The system was compared to modern-day slavery and left vulnerable workers with little protection and open to abuse.
   - Freedom of movement is guaranteed under the new rules, including giving workers the right to change jobs.

   - The Battle of Aleppo was a major military confrontation in Aleppo, the largest city in Syria, between the Syrian opposition (including the Free Syrian Army (FSA) and other Sunni groups, such as the Levant Front and the Al-Qaeda-affiliated Al-Nusra Front), against the government of Bashar al-Assad, supported by Hezbollah, Shia militias and Russia and against the Kurdish People’s Protection Units.

4. China’s freight train to London travels 12,000 km in 18 days
   - The first freight train travelling all the way from China to London set off - on a journey that covered a staggering 7,456 miles and pass through nine countries.
   - The Train departed from yiwu west railway station in Zhejiang Province of China and ended its journey in Barking, east London in around 18 days.
   - Its route will snake through China, Kazakhstan, Russia, Belarus, Poland, Germany, Belgium, France and finally Britain.

5. World Bank holds meet with India on Indus Water Treaty
   - India maintained its position that the designs of the Ratle and Kishenganga projects do not violate the Indo-Pak Indus Water Treaty (IWT).
• Following this, the World Bank decided to set up a Court of Arbitration (CoA) to settle the disputes following Pakistan’s demand and also agreed to appoint a neutral expert as sought by India.
• IWT is a bilateral water-distribution treaty between India and Pakistan signed in 1960. It was brokered by the World Bank.
• It gives India control over three eastern rivers Ravi, Beas and Sutlej and Pakistan control over three western rivers Indus, Jhelum and Chenab.

6. ‘One China’ policy is ‘non-negotiable’: China
• The ‘One China’ principle is non-negotiable, the China’s foreign ministry said, adding that it forms the political foundation for relations with the US.
• One China has been acknowledged by the US since 1979, when President Jimmy Carter developed closer ties with Beijing, at the expense of contact with Taiwan.
• For decades, the US has avoided direct diplomatic contact with Taiwan’s leaders, concurring with Beijing’s assertion that Taiwan is simply a breakaway province of China. Taiwanese authorities consider the island an independent country.

7. Ecuador to chair G-77
• Ecuador has taken over from Thailand as chair of the Group of 77 (G77) countries of the United Nations for the year 2017.
• The group promote collective economic interests of the 134 developing countries at the United Nations, including India.
• The group was founded in June 1964 by the Joint Declaration of the Seventy-Seven Countries at the UNCTAD and had 77 members initially.

8. India and France sign White Shipping Agreement.
• The agreement will enable navies of India and France to coordinate their roles in stabilising Indo-Pacific region.
• It will enhance Indo-French maritime security cooperation in the region. It will be implemented over the next few months.
• India and France firmed up cooperation on sharing of radars in the Indian Ocean during Prime Minister Narendra Modi’s visit to Paris in 2015.
• The Indo-French dialogue also emphasised on Freedom of Navigation in IOR and Pacific in the backdrop of China’s territorial claims and dominance in the South China Sea region.

9. Tech diplomacy: Denmark to appoint world’s first ‘digital ambassador’
• Denmark will become the first country in the world to appoint a special “digital ambassador” to work on building ties with the globe’s tech giants.
• The market values of Apple and Google are so large that the corporations could take chairs at the international G20 forum, the panel of the world’s 20 largest economies, if they were countries.
10. Venezuela, Libya again lose UN vote rights over dues debts

- Venezuela and Libya have been suspended from voting in the U.N. General Assembly for the second time in two years because of millions of dollars in unpaid dues to the world body.

- **Venezuela’s oil-dependent economy** has spiraled into crisis since world oil prices began a plunge in 2014. Venezuelans are grappling with **triple-digit inflation** and widespread **food shortages**.

- **Libya’s economy** has suffered greatly since the country was **hurled into turmoil** by the 2011 uprising that toppled and killed longtime dictator Moammar Gadhafi.
**Summits**

1. **Mercosur revokes membership of Venezuela**
   - Mercosur is a sub-regional economic bloc of South American countries. Its purpose is to promote free trade and the fluid movement of goods, people, and currency like a common market.
   - The *founding members* of Mercosur — Argentina, Brazil, Uruguay and Paraguay.
   - It was established in 1991 and its headquarters are located at Montevideo (Uruguay).
   - It had suspended Venezuela from it for violating the bloc’s democratic principles and failing to meet its basic standards.

2. **6th Asia Pacific Ministerial Conference of Housing and Urban Development (APMCHUD)**
   - Hosted in New Delhi, India.
   - **Mission:** Promoting Sustainable Development of Human Settlements in Asia Pacific Region, this accounts for 60 per cent of the world population and 55 per cent of global urban population.
   - Discussed issues ranging from crowded city centres to peripheral expansion, metropolitan based urban population growth, megacities and urban corridors, among others.
   - Outcome: **Delhi Declaration** and implementation plan for aligning urban development strategies of member countries with the **New Urban Agenda** adopted at Quito, Ecuador in 2016.

3. **6th Heart of Asia conference held in Amritsar, Punjab**
   - Heart of Asia- Istanbul process of Afghanistan, adopted the **Amritsar declaration**, which focuses to address terrorism and enhancing regional economic cooperation in Afghanistan.
   - The theme of this edition of the conference was “**Addressing Challenges, Achieving Prosperity**”.
   - **14 participating countries:** Russia, China, India, Pakistan, Afghanistan, Iran, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Saudi Arabia, UAE, Azerbaijan and Turkey.

   **Amritsar Declaration deals with:**
   - **Terrorism** also talks about *haqqani network* (Afghan guerilla insurgent group), **Drug menace**, **CCIT** (comprehensive convention on international terrorism), **Connectivity** to enhance wider and regional economic cooperation, regional connectivity including Iran-India-Afghanistan trilateral agreement on developing Chabahar, **OBOR** (Silk Road Economic Belt) and Maritime Silk Road between China and Afghanistan, **International community** and
ANDSF for continued financial support to the Afghanistan National Defence and Security Forces (ANDSF) until 2020.

4. Nepal to host 4th BIMSTEC Summit 2017
- Nepal is likely to host the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Summit this year.
- The BIMSTEC was founded in 1997 and is an international organisation involving a group of countries in South Asia and South East Asia.
- Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan and Nepal are members of the body that works on 14 sectors including trade and investment, technology, energy, transportation and communication, among others.

5. India to host International Nuclear Security meet
- The MEA (Ministry of Economic Affairs) in coordination with the Department of Atomic Energy is hosting the Implementation and Assessment Group Meeting of the Global Initiative to Combat Nuclear Terrorism (GICNT).
- The event highlights India’s commitment to global nuclear non-proliferation and peaceful uses of nuclear energy and is part of its overall engagement with the international community on nuclear security issues.
- GICNT was launched in 2006 jointly by the Russian Federation and the United States. In the past 10 years, it has grown to include 86 partner nations and five official observer organisations and has held several multilateral activities in support of its Statement of Principles.
   - TeamIndus, a Bengaluru-based private aerospace company, has said it will send a spacecraft to the moon on December 28, 2017, aboard an Indian Space Research Organisation (ISRO) rocket.
   - The mission’s aim is to land this spacecraft on the moon, have it travel at least 500 metres and beam high-definition video, images and data back to the earth.
   - Except for the launch vehicle, all of the technology that will power the rover and lander is developed in-house by TeamIndus.
   - TeamIndus has high-profile investors, including Ratan Tata of the Tata Group; Sachin and Binny Bansal, co-founders of Flipkart and Nandan Nilekani, co-founder of Infosys Ltd, and is a 100-member team of engineers, space enthusiasts, former Air Force pilots and former ISRO employees.
   - The Team only one from India — is in the running for the Google Lunar XPRIZE, a $30 million (approx. Rs. 200 crore) competition, to encourage private companies to launch space missions.

2. Japan Launches Space Junk Collector into Orbit
   - More than 500,000 pieces of “space junk” are circling our planet and being tracked by NASA.
   - Japan’s space agency (JAXA) launched a Kounotori 6 (HTV-6) spacecraft that will deliver a large magnetic tether, made from thin wires of stainless steel and Aluminum. It is designed to redirect space junk towards Earth’s atmosphere.
   - Electrodynamic tether (EDT), an advanced high-efficiency propulsion system, is a promising candidate to deorbit the debris objects at low cost.
   - In theory, the net-like tether will generate enough slowing effect to influence the trajectory of space debris toward Earth’s atmosphere where they will burn up.
   - Once in orbit, the spacecraft is set to perform Kounotori Integrated Tether Experiments (KITE) in order to test out the new technology designed by JAXA engineers in collaboration with Nitto Seimo Co., a Japanese fishing net company.

3. Tarang Sanchar
   - The Department of Telecom (DoT) launched ‘Tarang Sanchar’ portal that will let users check radiation compliance status of mobile towers and transmitters across country.
• The portal has data from 12.5 lakh base transceiver stations (BTS). It will enable users to view tower-specific details such as the operator, the supporting technology (2G/3G/4G).
• It will also help user to check with mobile tower meets electro-magnetic frequency (EMF) by putting in a specific request to DoT.

4. SASTRA Ramanujan prize for Radziwill, Matomaki
• The 2016 SASTRA-Ramanujan award for mathematics was presented to Maksym Radziwill of McGill University, Canada. The joint winner is Kaisa Matomaki of University of Turku, Finland.
• SASTRA University presents the Ramanujan award to a leading mathematician under 32 years. The age limit for the prize is 32 because Ramanujan had achieved so much in his brief life of 32 years.
• This year the prize has been jointly for their ‘revolutionary’ collaborative work on short intervals in number theory.
• Kaisa Matomaki from Finland's University of Turku is first woman to receive this prize.

5. TanSat launched by China, to monitor Global Carbon emissions
• TanSat will thoroughly examine global CO2 levels every 16 days, accurate to at least 4 ppm (parts per million).
• Located in sun synchronous orbit about 700 kms above the earth, It has three-year mission life.
• China is the third country after Japan and the US to monitor greenhouse gases through its own satellite.

6. IIT Madras group develops alternative system of communication during disasters
• An IIT Madras team is developing a low-cost communication system that can enable rescue workers to communicate with a locally established centre and, through this centre, to the National Disaster Management Agency (NDMA) in Delhi.
• The system, named DISANET, allows basic services such as voice, text and video communications to be exchanged within this network of rescue workers, Master Operation Centre and the NDMA.
• The design has four subsystems — WiFi, a satellite link, single-carrier GSM and LTE (Long Term Evolution) which is a standard for high-speed wireless communication for mobile phones and data terminals.
• Presently Walkie talkie/VHF/UHF devices are used which are very expensive. The whole new system is compatible with basic model mobile phones.

7. Trojan Asteroids
• Trojans are asteroids that are constant companions to planets in our solar system as they orbit the Sun, remaining near a stable point 60 degrees in front of or behind the planet.
Since they constantly lead or follow in the same orbit, they will never collide with their companion planet. There are six planets in our solar system with known Trojan asteroids—Jupiter, Neptune, Mars, Venus, Uranus and Earth.

Scientists predict that there should be more Trojans sharing Earth’s orbit, but these asteroids are difficult to detect from Earth because they appear close to the Sun from Earth’s point of view.

NASA’s OSIRIS-REx spacecraft which would bring samples from Asteroid Bennu, is set to search for elusive “Trojan” asteroids which are constant companions to Earth as it orbits the Sun.

8. China opens first fully-owned satellite ground station near North Pole

- It is formally known as China Remote Sensing Satellite North Pole Ground Station. It is located about 200 kms north of the Arctic Circle in Sweden.
- The Arctic ground station is built and run by Chinese Academy of Sciences. It will allow China to collect satellite data anywhere on Earth at speeds that were more than twice as fast as before.
- It will also play an important role in China's Gaofen project, a network of observation satellites orbiting Earth to provide global surveillance capabilities which is due to be completed in 2020.

9. Mesentery

- Named as the mesentery, the organ connects the intestine to the abdomen and had for hundreds of years been considered a fragmented structure made up of multiple separate parts.
- Mesentery is a fold of the peritoneum which attaches the stomach, small intestine, pancreas, spleen, and other organs to the posterior wall of the abdomen.

10. Data From India's GMRT Among Others Help Astronomers Find Cosmic Double Whammy

- By combining data from several telescopes around the world, including India's Giant Metrewave Radio Telescope (GMRT) in Pune, astronomers have discovered a cosmic double whammy unlike any ever seen before. Besides GMRT, the researchers combined data from NASA's Chandra X-ray Observatory, the US National Science Foundation's Karl G. Jansky Very Large Array Telescope.
- Two of the most powerful phenomena in the Universe, a supermassive black hole, and the collision of giant galaxy clusters, have combined to create a stupendous cosmic particle accelerator.
This cosmic double whammy is found in a pair of colliding galaxy clusters called Abell 3411 and Abell 3412 located about two billion light years from Earth.

This discovery solves a long-standing mystery in galaxy cluster research about the origin of beautiful swirls of radio emission stretching for millions of light years, detected in Abell 3411 and Abell 3412 with the GMRT.

11. IGI Airport first in world to adopt digital platform Arc

- Delhi Airport has claimed it has become the first aerodrome in the world to adopt unique performance and benchmarking digital platform, Arc, which helps in tracking and monitoring building performance.
- Developed by Green Business Certification Inc (GBCI) and US Green Building Council (USGBC), the global certifying body for all Leadership in Energy and Environmental Design (LEED) projects, this dynamic platform at T3 would be used by airport operator to measure, manage and improve performance of airport on resource consumption, carbon emissions and quality of passenger space.

12. The 2017 Crafoord Prize has been conferred upon two American and one Japanese scientists for their fundamental discoveries in immune regulation.

- The awardees of the scientific prize include Japan's Shimon Sakaguchi, Fred Ramsdell and Alexander Rudensky.
- The researchers are being rewarded for their work on the discovery of regulatory T cells, which function as security guards for the immune system by curbing overzealous white blood cells that attack healthy cells in the body
- Autoimmune diseases arise when the body's immune system malfunctions, attacking normal tissue. Globally, these diseases cause great suffering and premature death for millions of people.
- Autoimmune diseases include multiple sclerosis (MS), type 1 diabetes and polyarthritis. The latter is a term used for rheumatic diseases in which multiple joints are affected.
- The work has lead to open way for the transformative treatments for autoimmune diseases including rheumatoid arthritis, MS and type 1 diabetes.

13. NASA has approved a mission to explore 16 Psyche, an iron-rich asteroid.

- NASA craft will be launched in 2023, and will arrive at Psyche in 2030. The Planet is almost entirely composed of iron and nickel. The mineral contents on the asteroids are worth over 100-thousand times the value of the entire world economy.
- Scientists believe Psyche to be a protoplanet i.e. its entire body consisting of what one day could be the core of a new planet.
- The information gathered will undoubtedly useful to astronomers to learn more about the formation and early life of planets.
• Astronomers also believe Psyche to contain water, making it a possible candidate for a stellar fuel station, as water can be used to sustain life and synthesize rocket fuel.

14. Ministry of Earth Sciences commissions Higher Resolution Weather Prediction Model
• The new model which has a resolution of 12 km has been on trial since September last year. It has now replaced the earlier version which had a horizontal resolution of 25 km.
• The MoES's operational Ensemble Prediction System (EPS) will also be upgraded to 12 km. The EPS is adopted to overcome the problem of uncertainties in the forecasts.

15. Scientists spot sunspot with centre twice the size of Earth
• Atacama Large Millimetre/submillimetre Array (ALMA) antennas located in Atacama Desert of northern Chile has spotted a new view of the dark, contorted centre of a sunspot that is nearly twice the diameter of the Earth.
• Sunspots: They are darker, cooler areas on the surface of the sun in a region called the photosphere (having temperature 5,800 degrees Kelvin).
• Sunspots can be very large, up to 50,000 kilometers in diameter and have temperatures of about 3,800 degrees K. They are dark in comparison with the brighter and hotter regions of the photosphere surrounding them.

• The Kirameki-2 satellite has been designed to upgrade Japan's existing communication network in the face of China's increasingly assertive maritime activity and North Korea's missile threat.
• They will be also used by Japanese troops operating overseas as part of international peacekeeping operations, including those off the Somali coast and in South Sudan.

17. Scientists creates world's first stable semi-synthetic organism
• The semi-synthetic organism is the modified E.coli bacteria created by introducing DNA molecules that are not found in nature in a common bacterium.
• The newly created bacterium has two human-created X and Y bases that grow and divide, much like the four natural bases.
• For this, researchers had optimised a tool called a nucleotide transporter, which brings the materials necessary for the unnatural base pair to be copied across the cell membrane.
• In future, it can help in creation of microbes capable of manufacturing entirely new proteins, which can provide leads to new medicines and nanotechnology breakthroughs.
18. Vampire star caught in the act by ASTROSAT
- India's first dedicated space observatory, ASTROSAT has captured the rare phenomenon of a small six-billion-year-old vampire star preying on a bigger celestial body.
- The vampire star phenomenon is observed when smaller star sucks material (mass and energy) out of the bigger companion star, causing its eventual death.
- It is also called a blue straggler as small star becomes bigger, hotter and bluer, giving it the appearance of being young, while the ageing companion burns out and collapses to a stellar remnant.
- Astrosat is India's first dedicated multi-wavelength space observatory launched in September 2016.

19. New TB-resistant cows developed in China
- Chinese scientists have produced world's first live cows with increased resistance to bovine tuberculosis (TB).
- Researchers had used a modified version of the CRISPR gene-editing technology called CRISPR/Cas9n to insert a new TB resistance gene NRAMP1 into the genome of bovine foetal fibroblasts, cell derived from female dairy cows.
- When it was exposed to Mycobacterium bovis (M. bovis), bacterium that causes bovine TB, transgenic animals showed increased resistance to M. bovis.

20. Toxins in Litchi Fruit May kill Children
- Scientists from US and India have found that consumption of litchi fruit on an empty stomach can result in very low blood glucose level and acute encephalopathy leading to seizures and coma, and causes death in Children in many cases.
- Litchi fruit contains the toxins hypoglycin A and methylenecyclopropyl-glycine (MCPG). Its consumption and skipping evening meals causes very low blood glucose level (less than normal 70 mg/dL) and acute encephalopathy in children.
- Unripened litchi contains Hypoglycin A, naturally-occurring amino acid that causes severe vomiting (Jamaican vomiting sickness). MCPG is a poisonous compound found in litchi seeds that cause a sudden drop in blood sugar, vomiting, altered mental status with lethargy, unconsciousness, coma and death.
- These toxins may block enzymes involved in normal glucose metabolism and result in an inability to synthesis glucose leading to acutely low level of blood sugar.
- Litchi is a tropical fruit native to the Guandong and Fujian province of China. China is the main producer followed by India (Bihar accounts for 71%).

21. The Indian Space Research Organisation (ISRO) has indigenously developed Telemetry & Telecommand Processor (TTCP)
- The processor development was undertaken up by ISRO as part of ‘Make in India’ campaign to replace the expensive imported equipment necessary for uplinking and downlinking to satellites.
• It will be used by ISRO in Integrated Spacecraft Testing of Low Earth Orbit, Geostationary Orbit and Interplanetary Spacecraft.

22. Intech DMLS launches India’s First indigenously developed Jet engines
• Intech DMLS Limited, a metal 3D printing provider and metal additive manufacturing establishment in aviation sector, has launched the country’s first indigenously developed jet engine series.
• The engine MJE 20 is indigenously designed and manufactured with a thrust of 20 Kgf. It is currently undergoing testing at our Bengaluru facility.

23. 28th February: National Science Day
• National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir Chandrashekhara Venkata Raman on 28 February 1928.
• The theme of the year 2017 was “Science and Technology for Specially Abled Persons”.

24. ISRO Successfully tests Cryogenic Engine for Upper Stage of GSLV Mk III
• ISRO has successfully ground tested its indigenously developed Cryogenic Upper Stage engine for GSLV Mark III at its Liquid Propulsion Complex at Mahendragiri in Tirunelveli district of Tamil Nadu.
• The C25 stage is the most powerful upper stage developed by ISRO and uses Liquid Oxygen and Liquid Hydrogen propellant combination. The development of C25 cryogenic stage will provide ISRO capability to launch four ton class satellites in Geosynchronous Transfer Orbit.
• A Cryogenic rocket stage is more efficient and provides more thrust for every kilogram of propellant it burns compared to solid and earth-storable liquid propellant rocket stages.

25. First ever Cloud Seeding Project approved
• Under this programme, weather scientists using aircrafts will spray chemicals (silver iodide) over clouds hovering above Solapur district, a rain shadow region of Western Ghats in the state.
• In this experiment, scientists will fly two aircraft and spray silver iodide and dry ice on 100 clouds and compare them with 100 unseeded clouds. Ground radar will be used to track the clouds and verify which ones contributed rain.

26. Scientists ‘unmask’ superbug-shielding protein
• Scientists from University of Western Australia have successfully mapped three-dimensional molecular structure of EptA protein that shields superbugs from antibiotics.
• The EptA protein causes multi-drug resistance by masking bacteria from both the human immune system and important antibiotics.
• The shape of protein was mapped using technique called X-ray crystallography which is mainly used for determining the atomic and molecular structure of a crystal.
• This mapping is a breakthrough because it will allow development of a drug to prevent superbugs hiding from medication.

27. India launches record 104 satellites in single mission
• India has created history by successfully launching 104 satellites on a single mission, overtaking the previous record of 37 satellites launched by Russia in 2014.
• Of the 104 small satellites, 96 belong to the United States while Israel, Kazakhstan, the United Arab Emirates, Switzerland and the Netherlands are the other foreign clients.

28. IAF inducts indigenous Early Warning System
• The Indian Airforce (IAF) has formally inducted the first indigenously built Airborne Early Warning and Control System (AEW&C) dubbed as NETRA.
• It consists of active electronically scanned radar, secondary surveillance radar, electronic and communication counter measures, LOS (Line of Sight) and beyond-LOS data link, voice communication system.
• AEW&C NETRA system is based on Embraer aircraft (Emb-145 platform). It has self-protection suite and also mid-air refuelling capability to enhance surveillance time.
• This system gives 240-degree coverage of airspace. DRDO has developed three NETRA systems and its three aircraft will be based at Bhatinda, facing the Western border. With this India, joins group of other countries such as United States, Russia and Israel which have developed the AEW&C system.

29. Thubber: Stretchable Rubber Material with high Thermal Conductivity
• It is an electrically insulating composite material that exhibits an unprecedented combination of metal-like thermal conductivity, elasticity similar to soft, biological tissue.
• Thubber consists of a soft elastomer with non-toxic, liquid metal microdroplets suspended within it. This semi-liquid state allows the metal to deform with the surrounding rubber at room temperature. When it is pre-stretched at room temperature, it stretches up to six times its initial length.
• Potential applications: In developing wearable computing and soft robotics, industries like athletic wear and sports medicine and in advanced manufacturing, energy, and transportation.
Environment

1. MoES launches Winter Fog Experiment 2016-17
   - The Ministry of Earth Sciences inaugurated the Winter Fog Campaign at the New Delhi Airport to understand the science of fog formation.
   - The campaign is being conducted at the Indira Gandhi International Airport (IGIA), with support of Airport Authority of India and GMR, IGIA.
   - The goal of the Winter Fog Experiment (WIFEX) is to
     1. Develop methods for forecasting winter fog on various temporal and spatial scales,
     2. Reduce its adverse impact on aviation, transportation and economy, and loss of human life due to accidents.
   - Land use changes and increasing pollution in the region are responsible for growing fog occurrence.

2. Tropical Cyclonic Storm Vardah to hit Andhra Pradesh
   - Originated in Southern Thailand.
   - The main areas hit by the storm are Tamil Nadu and Andhra Pradesh
   - Severe cyclonic storm with a velocity of 100 to 110 km/hr gusting to 120km/hr.
   - A list of few cyclones that have hit India in the last one year
     a. Nanda (2016): Made a land fall near Nagapattinum in Tamil Nadu. This was only a deep depression and it never became a cyclone.
     b. Kyant (2016): Velocity around 35-45km/hr up to 50km/hr crossed the southern Andhra Pradesh coast. This was also a depression and never got intensified into a cyclone.
   - A landfall is the intersection of the center of tropical cyclone with a coastline.

3. Majuli set to become country's first ever carbon neutral district
   - Assam government has initiated a project to make river-island Majuli the country's first ever Carbon Neutral district by 2020.
   - The project titled 'Sustainable Action for Climate Resilient Development in Majuli' (SACReD, Majuli).
   - The project, SACReD, Majuli has been initiated to combat climate change and reduce greenhouse gas emissions.
   - The project will be designed and implemented by a district level committee in partnership with other departments of the district.
4. Huge dead zone discovered in Bay of Bengal
   - ‘Dead zone’ — an area in water body that contains little or no oxygen and supports microbial processes that remove vast amount of nitrogen from the ocean.
   - An estimated 60,000 square kilometres of dead zone found in Bay of Bengal.
   - Dead zones are well-known off the western coasts of north and south America, off the coast of Namibia and off the west coast of India in the Arabian sea.
   - Mostly they occur naturally but it can be caused by excessive nutrient pollution from human activities coupled with other factors.

5. Cancel Illegal Salt Pans In Sambhar Lake: NGT
   - National Green Tribunal (NGT) has directed the Rajasthan government to cancel allotments of salt pans in the Sambhar Salt Lake that fall within the wetland and run contrary to the mandate of Wetland Rules, 2010.
   - A/C to Vinod Kapoor Committee report in 2010 there was illegal business of brine extraction in the Sambhar Salt Lake (SSL). It resulted in to exploitation of water resources leading to decline groundwater level by almost 60 metres in the area.
   - These activities were carried out illegally contrary to the provisions of the Wetland (Conservation and Management) Rules framed under the Environment Protection Acts, 1986.
   - Sambhar Salt Lake is India’s largest inland salt lake. It is located in Nagaur and Jaipur districts of Rajasthan. The lake is actually an extensive saline wetland designated as a Ramsar site. It is important wintering area for flamingos and other birds that migrate from northern Asia.

6. Union Government’s Approval For Using Deer Antlers in Ayurveda Medicines
   - The Kerala Government has approached the Union Government for allowing use of antlers of spotted deer and sambar in Ayurveda medicines.
   - Kerala State Board for Wildlife (SBWL) has forwarded proposal to National Board for Wildlife (NBWL) and Ministry of Environment and Forests.
   - SBWL is seeking suitable amendments to the Wildlife (Protection) Act, 1972 as it prohibits (bans) sale and use of antlers in India. It has included antler in the definition of wildlife trophy and Section 39 of the Act prohibits person from acquiring or keeping trophies in his possession without the previous permission of Chief Wildlife Warden or the authorised officer.
   - Antlers are the extensions of the deer’s skull. They shed their antlers annually. It is believed that antlers have medicinal values mainly used for invigorating spleen, strengthening bones/muscles and boosting blood flow.

7. Eco-Sensitive Zone: Sanjay Gandhi National Park
   - MoEF declares the Sanjay Gandhi National Park (SGNP), located in north Mumbai and southern Thane declared an "Eco-Sensitive Zone".
   - The ESZ will have a minimum extent of 100 metres and maximum upto four kms from the SGNP's boundaries.
   - The objective was to create a buffer area for the protection of the national park.
Due to the unique location of SGNP within a mega-city, any new construction within ESZ will be as per the laws of the Brihan Mumbai Municipal Corporation, Maharashtra Regional and Town Planning Act and ESZ provisions.

The area is the origins of Mumbai’s only river, the Mithi, and the 2,400-year old Kanheri Caves complex.

Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the MoEFCC around Protected Areas, National Parks and Wildlife Sanctuaries. The purpose of declaring ESZs is to create some kind of “shock absorbers” to the protected areas by regulating and managing the activities around such areas. They also act as a transition zone from areas of high protection to areas involving lesser protection.

8. 45% Of Country’s Bird Species Found In Himachal Pradesh: Great Backyard Bird Count

About 45 per cent of country’s total bird species were reported in Himachal Pradesh during Great Backyard Bird Count (GGBC) 2017 in the State.

The Great Backyard Bird Count is the first online citizen-science project aimed at collecting data on wild birds and to display results in near real-time.

It was launched in 1998 by the Cornell Lab of Ornithology and National Audubon Society, a powerful source of information on birds.

9. New Ginger Species With Medicinal Properties Discovered In Andamans

Botanical Survey of India (BSI) has found a new species of Zingiber (commonly referred as Ginger) from the Andaman and Nicobar Islands.

The new species Zingiber pseudosquarrosum, indeed possesses ethno-medicinal uses like to treat abdominal pain and anti-helminthic troubles.

The pseudo stem of the new species is predominantly red in colour. Flowers have a vermilion tinge and dehisced fruit [fully mature fruits] are lotus shaped. Inflorescence buds are urceolate in shape. The species has got tuberous root. The morphological features of this species make it distinct from other species belonging to the genus Zingiber.

10. New Fault In Indian Ocean May Trigger Earthquakes In Future: Study

A new plate boundary may be forming on the floor of the Indian Ocean in Wharton Basin as a result of the 2012 earthquake that shook the Andaman-Sumatra region.

Scientists created a high-resolution imagery of the sea floor by using data which unveiled deformations that had occurred on the Indo-Australian Plate. It showed that the plate had broken along a 1,000 km fracture zone due to...
2012 earthquakes, resulting in a new plate boundary and likely to be the site of future fault-slip earthquakes.

11. New Species Of Gibbon Discovered In China
   ➢ Scientists have discovered a new species of primate, living in south-west China’s rainforests.
   ➢ It has been named the ‘Skywalker hoolock gibbon (Hoolock tianxing),’ because the Chinese characters for its scientific name translate to “heaven’s movement”—but also because they’re fans of Star Wars.
   ➢ This species already has been proposed to classify as endangered in IUCN list. Gibbons are classified under vulnerable category of IUCN.

12. SC Approves Centre’s Graded Response System To Tackle
   ➢ The Supreme Court-backed grade system categorizes four levels of air pollution in Delhi NCR.
   ➢ Environment Pollution Control Authority (EPCA), reports categorize four levels of air pollution based on atmospheric particulate matter (PM) levels.
   ➢ Particulate matter can be fine—measuring 2.5 micrometres or less and coarse—those that are 10 micrometres or less.
   ➢ Four categories of air quality—moderate to poor, very poor, severe, very severe or emergency.

13. Parliamentary Committee Report Highlights Alarming Rise In Forest Fires
   ➢ The frequency of fires raging across Central Indian forests and the Himalayan Pine forests has risen by a drastic 55 per cent in the past year.
   ➢ The number has touched 24,817 in 2016, a “really alarming” rise, from around 15,937 fires in 2015, says the report by Parliamentary Standing Committee on Science and Technology, headed MP Renuka Choudhary.
   ➢ The committee has suggested a national policy on managing forest fires.
The three central States of Odisha, Chhattisgarh, and Madhya Pradesh contribute a third of the forest fires. Madhya Pradesh has seen a nearly ten-fold increase, from just 294 in 2015 to more than 2,600 in 2016.

14. NGT Bans Open Waste Burning Across The Country
- The National Green Tribunal (NGT) imposed a complete ban on burning of waste in open places and announced a fine of Rs. 25,000 on each incident of bulk waste burning.
- Directing every State and Union Territory to enforce and implement Solid Waste Management Rules, 2016, and also asked to ban the short-life Polyvinyl Chloride (PVC) and chlorinated plastics within a period of six months.
- NGT is a statutory body established by a Government Notification using the powers of Section 3 of the NGT Act 2010.

15. Hope Island becomes graveyard for Olive Ridley's Turtles
- 54 Carcasses of Olive Ridley turtles are found on the beaches of Hope Island, Andhra Pradesh.
- This indicates that the breeding cycle of the vulnerable species has been dealt a severe blow this year by mechanised fishing boats. Owners of these boats are not taking precautions and most of them are crushed under the boats and succumb to injuries.
- The turtles, commence their journey from the warm Indian and Pacific Ocean during their mating season in October and November. When they reach the Bay of Bengal, majority lay eggs on the beaches in Gahirmatha, Odisha and some on Hope Island of the Coringa Wildlife Sanctuary.
- The Fisheries Department tried to encourage the mechanised boat owners to fit a Turtle Excluder Device (TED) to their trawl nets to allow the animals to pass.

16. Union Cabinet approves ratification of the Second Commitment Period of Kyoto Protocol
- Cabinet approves ratification of the Second Commitment Period of Kyoto Protocol to the United Nations Framework Convention on Climate Change on containing the emission of Green House Gases (GHGs).

Background
- The Kyoto Protocol was adopted in 1997 and the 1st commitment period was from 2008-2012.
- At Doha in 2012, the amendments to Kyoto Protocol for the 2nd commitment period (the Doha Amendment) were successfully adopted for the period 2013-2020. Developed countries have already started implementing their commitments under the 'opt-in' provisions of the Doha Amendment.
17. Government launches Rubber Soil Information System
- Commerce & Industry ministry launched Rubber Soil Information System (RubSIS).
- It is an online system for recommending application of appropriate mix of fertilizers to the specific plantations of rubber growers depending upon their soil nature.
- RubSIS, developed by Rubber Research Institute of India (RRII) under the Rubber Board in collaboration with three agencies viz Indian Institute of Information Technology and Management, Kerala, National Bureau of Soil Survey and Land Use Planning, ICAR and National Remote Sensing Center, ISRO.
- It is a cost effective tool for sustainable & scientific management of rubber growing soils and preventing indiscriminate use of chemical fertilizers and soil degradation.
- Kottayam (Kerala), the largest rubber growing district of India.

18. Climate change plan to get 3 new missions
- Prime Minister’s Council has instituted a National Action Plan on Climate Change in 2012 with eight-point plan to fight climate change.
- 3 new missions to address the impact of climate change on health, coastal zones and waste-to-energy.
- India’s will soon have an 11-point plan on climate change.

19. FAO calls for International collaboration on wheat rust
- The Food and Agricultural Organization (FAO), a United Nations agricultural agency has called for International collaboration on wheat rust to curb threat to global supplies.
- According to studies wheat in Africa, Asia and Europe is increasingly threatened by fresh groups of two new groups or races of both yellow rust and stem rust. Some of the most vulnerable regions are also the highest producers of wheat.
- Yellow rust is a fungal disease which turns leaves yellowish and stops the photosynthesis. It is caused by the Magnaporthe oryzae fungus.

20. February 2: World Wetlands Day
- On February 2, 1971, the convention of wetlands was adopted in Ramsar, Iran, on the shores of the Caspian Sea. Also called the Ramsar Convention, the World Wetland Day marks the date of the signing of the Convention on Wetlands.
- World Wetland Day was celebrated for the first time in 1997.
- For World Wetlands Day in 2017, the theme is Wetlands for Disaster Risk Reduction.
- India has around 26 wetlands of international importance as defined by the Ramsar Convention for the conservation and sustainable utilization of wetlands.
In September 2016, a report by IUCN, prepared in coordination with the secretariats of the Ramsar Convention and UNESCO, “Managing MIDAs-Harmonizing the Management of Multi-Internationally Designated Areas: Ramsar Sites, World Heritage sites, Biosphere Reserves and UNESCO Global Geoparks” was launched with the aim to support integrated management of these areas.

21. Barren Island volcano, India’s only live volcano, became active in January

- India’s only live volcano which had started showing activity in 1991 after lying dormant for over 150 years has again started spewing ash.
- The Barren Island volcano, located 140-km north-east of Port Blair, dormant for more than 150 years started erupting in 1991.
- Scientists from CSIR-NIO have been surveying the Andaman Basin and they have identified many small submerged volcanoes in a linear chain called a volcanic arc.
- These volcanoes are formed due to the rising magma formed deep in the mantle due to the melting of the subducted Indian Ocean crust.

22. Scientists claim discovery of Zealandia a submerged continent in Pacific Ocean

- Zealandia is around 4.5-million square km land mass and is 94% under water. Only its highest points — New Zealand and New Caledonia are visible.
- It is believed that it had broken off from Antarctica about 100 million years ago, and then from Australia about 80 million years ago as part of the breakup of super-continent Gondwanaland and sank beneath sea.

23. Two new critically endangered plant species spotted in Eravikulam National Park

- The new species of balsams (impatiens) Impatiens Mankulamensis and Impatiens panduranganii were discovered from the shola forests on the periphery of the park and Mankulam forests.
- Impatiens plants are also called jewel weeds. They are seen in pristine forests where moisture content and relative humidity are high.

24. Meghalaya’s Living Root Bridge Nominated for NIF Award

- Meghalaya’s root-bridge has been nominated for the prestigious National Innovation Foundation (NIF) award for grassroots innovations and outstanding traditional knowledge.
- It is a community-driven innovation by forest dwellers in the southern slopes of the state. The recognition is not for any single community, but for all communities who are engaged in growing living root bridges which have simplified bridge construction across rivers and streams.
- Meghalaya Basin Development Authority has identified at least nine villages that train and utilise the aerial roots of Rubber Trees (Ficus elastica) to make bridges across water bodies.
25. **181 Irrawaddy Dolphins counted in Odisha**
   - Irrawaddy Dolphin is **not a true river dolphin**, but an oceanic dolphin that lives in brackish water near coasts, river mouths and in estuaries in South and Southeast Asia.
   - It has established **subpopulations in freshwater rivers**, including the Ganges and the Mekong, as well as the Irrawaddy River from which it takes its name.
   - Its habitat range extends from the Bay of Bengal to New Guinea and the Philippines. They do not appear to venture off shore.

26. **Scientists from Jawaharlal Nehru Tropical Botanic Garden and Research Institute confirmed the multiple therapeutic properties of Neurocalyx calycinus**
   - This plant is a medicinal plant **endemic to the southern parts of Western Ghats and Sri Lanka**.
   - The therapeutic properties of the plant were discovered based on traditional knowledge of Cholanaickan tribe of Kerala who used it to treat inflammations and wounds.
   - The herbal drug formulation derived from Neurocalyx calycinus possesses burn-healing, wound-healing, anti-cancer, analgesic, immuno-enhancing, anti-inflammatory, platelet-augmentation and anti-oxidant effects.
   - The presence of high Vitamin E content and potent cytoprotective activity in cell lines has also enhanced the prospects of developing an anti-cancer drug.

27. **World Wetland Day - 2nd February**
   - **World Wetlands Day is celebrated on February 2** each year to mark the Day the Convention on Wetlands was adopted in the Iranian City of Ramsar in 1971.
   - **The theme of World Wetlands Day for 2017 is ‘Wetlands for Disaster Risk Reduction’**. This theme has been selected to raise awareness on the vital roles of healthy wetlands in reducing the impacts of extreme events on communities and in helping to build resilience.
   - **This year** World Wetland Day is being celebrated **in collaboration with the Government of Madhya Pradesh at Bhoj Wetlands**, Bhopal, which is one of the 26 Ramsar sites that India has designated under the Ramsar Convention.
## Defence

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Country involved</th>
<th>venue</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Konkan 2016</td>
<td>India and UK</td>
<td>Mumbai and Goa</td>
<td>Maritime exercise conducted in two phases: 1. Command Planning exercise 2. Live Exercise (LIVEX), at Goa, which involves interaction between Marine Commandos (MARCOs). Both phases will involve sharing of best practices and lessons learnt in the field of Humanitarian Assistance and Disaster Relief (HADR) and Non-combatant Evacuation Operations (NEO).</td>
</tr>
<tr>
<td>Indra Navy-2016</td>
<td>India &amp; Russia</td>
<td>Bay of Bengal</td>
<td>The primary aim of exercise INDRA NAVY-16 is to increase inter-operability amongst the two navies and develop common understanding and procedures for maritime security operations.</td>
</tr>
<tr>
<td>Exercise EKUVERI N-2016</td>
<td>India and Maldives</td>
<td>Kadhdhoo, Lammu Atoll in Maldives.</td>
<td>The aim of the Joint military Exercise is to acquaint both forces with each other’s operating procedures in the backdrop of amphibious and counter insurgency/ Counter terrorism environment as also to enhance the existing military relationship</td>
</tr>
<tr>
<td>Sard Hawa</td>
<td>India’s BSF</td>
<td>Rajasthan</td>
<td>The purpose of the operation is to keep a hawk’s eye on the international border and check the instances of infiltration due to the dense fog in the area.</td>
</tr>
<tr>
<td>TROPEX 17</td>
<td>Indian Navy And Air Force</td>
<td></td>
<td>1. Indian Navy’s Annual Theatre Readiness Operational Exercise (TROPEX) 2. The exercise provided an apt-opportunity to test the combat capability of the Indian Navy, Indian Army, Indian Air Force and Coast Guard, 3. strengthened inter-operability and joint operations in complex conflict situation.</td>
</tr>
</tbody>
</table>
| Joint exercise between India and UAE | Indian Coast Guard (ICG) and their UAE counterpart | Dubai          | • Indian Coast Guard Ship (ICGS) **Samudra Pavak** has arrived on a goodwill visit to Dubai and anchored itself at Port Rashid.  
• Samudra Pavak or "**Purifier of the Seas**" has been deployed along the northwest maritime frontier to **safeguard the maritime interests of India**, like EEZ surveillance, search and rescue, pollution response and such other duties as **enshrined in the Coast Guard charter**. |
Weapons

<table>
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<tr>
<th>Name</th>
<th>Range and Type</th>
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</table>
| Nirbhay                     | • Long range surface-to-surface nuclear-capable subsonic cruise missile developed indigenously by the DRDO.  
                                • Terrain hugging missile which keeps on encircling the area of its target for several minutes and then hits bull’s eye.  
                                • Strike range of 700 km to 1000km, India’s answer to US’s Tomahawk and Pakistan's Babur missile. |
| Smart Anti-Airfield Weapon (SAAW) | • Flight tested from an Indian Air Force (IAF) aircraft.  
                                • Indigenously designed and developed 120 kg-class smart weapon, developed by DRDO, is capable of engaging ground targets with high precision up to a range of 100 kms. |
| Dhanush                     | • Advanced Towed Artillery Gun System (ATAGS)  
                                • Developed by DRDO aided by the transfer of technology (tot) clause signed with the Swedish company.  
                                • A range of 45 km with accuracy and precision. It also has night firing capability in direct fire mode. |
| Guided Pinaka Rocket        | • Guided Pinaka is transformed version of the Pinaka Rocket Mark-II, which has evolved from Pinaka Mark-I.  
                                • It has been jointly developed by ARDE Pune, DRDL Hyderabad and RCI Hyderabad.  
                                • It is equipped with a navigation, guidance and control kit.  
                                • Pinaka is an unguided rocket weapon area system (WAS) with a range of 40 km. It meant to neutralise large areas with rapid salvos. It can fire a salvo of 12 rockets in 44 seconds. |
| Agni-V Intercontinental Ballistic Missile (ICBM) | • Strike range of over 5,000-km  
                                • It can hit most northern parts of China and other parts of Asia, Europe and Africa.  
                                • It carries multiple independently targetable re-entry vehicles (MIRV) payloads. A single MIRV equipped missile that can deliver multiple warheads at different targets. |
| INS Khanderi                | • Navy’s second of the six submarines of Kalvari class Scorpene submarine.  
                                • Khanderi built at MDL in collaboration with M’s DCNS of France, as part of Project 75 of Indian Navy.  
                                • It has superior stealth and the ability to launch a crippling attack with torpedoes as well as tube-launched anti-ship missiles whilst underwater or on surface.  
                                • The first one, Kalvari, is completing sea trials commissioned on 8 December 2016, The Submarine Day, completing 50 years. |
<table>
<thead>
<tr>
<th><strong>Current Affairs</strong></th>
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<tr>
<td><strong>Quick Revision For 2017</strong></td>
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<td><strong>Page 51</strong></td>
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</table>

- Khanderi is named after the Island fort of Maratha forces, it is also the name for Tiger Shark.

<table>
<thead>
<tr>
<th><strong>Agni-IV missile</strong></th>
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<tr>
<td><strong>Nuclear- long range intercontinental ballistic missile (ICBM)</strong></td>
</tr>
<tr>
<td><strong>Surface-to-surface missile with a strike range of 4000 km</strong></td>
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<table>
<thead>
<tr>
<th><strong>Ababeel missile by Pakistan</strong></th>
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</thead>
<tbody>
<tr>
<td>Surface to surface nuclear-capable of carrying a nuclear warhead up to 2,200 kms, which brings many Indian cities within its striking range.</td>
</tr>
<tr>
<td>Pakistan indigenously-developed</td>
</tr>
<tr>
<td>The missile is capable of delivering multiple warheads, using Multiple Independent Re-entry Vehicle (MIRV) technology</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>Pakistan’s Babur-3</strong></th>
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<tr>
<td>Cruise missile</td>
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<tr>
<td>It can strike targets both at land and sea with high accuracy at a range of 700kms.</td>
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<tr>
<td>It is a low flying, terrain hugging missile, which carries certain stealth features and is capable of carrying various types of warheads.</td>
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<thead>
<tr>
<th><strong>Integrated Underwater Harbour Defence and Surveillance System</strong></th>
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<tbody>
<tr>
<td>Launched by Indian Navy</td>
</tr>
<tr>
<td>The system will enhance the security of valuable assets against asymmetric threats.</td>
</tr>
<tr>
<td>The IUHDSS is a state of the art system with integrated radars, electro optic cameras and sonars, a significant step in strengthening Harbour Defence and Security at Mumbai.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Advanced Area Defence (AAD) (Endo-Atmospheric Interceptor Missile)</strong></th>
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<tbody>
<tr>
<td>The endo-atmospheric missile, capable of intercepting incoming targets at an altitude of 15 to 25 kms successfully destroyed the incoming missile.</td>
</tr>
<tr>
<td>The launch has proved the Ballistic Missile Defence (BMD) prowess of the country.</td>
</tr>
<tr>
<td>The BMD consists of two interceptor missiles, the Prithvi Defence Vehicle (PDV) for exo-atmospheric ranges and the Advanced Area Defence (AAD) missile for endo-atmosphere lower altitudes.</td>
</tr>
</tbody>
</table>

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<tr>
<th><strong>Survey vessel INS Sarvekshak</strong></th>
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<tr>
<td>It has gone green by installing a 5kw solar power system on board.</td>
</tr>
<tr>
<td>The system is 100 per cent reliable for power source and can be used for communication equipment, battery charging and general lightings onboard round the clock with battery outputs during night.</td>
</tr>
</tbody>
</table>
Agni-V is the longest ballistic missile in India's defence arsenal to deliver nuclear weapons.

- It is classified as an Intermediate-Range Ballistic Missile (IRBM). But with smaller payloads it can reach targets of up to 8,000 km making it an Inter-Continental Ballistic Missile (ICBM). A surface-to-surface missile, it can carry a nuclear warhead of 1.5 tonnes across more than 5,000 km.
- With Agni-V, India has the capability to target most of the major cities and centres in China.
- It is 17-metre long, weighs 50 tonnes and powered by solid fuel.
- Today's test was a considered variant of the missile.
- The casing makes its maintenance easier and enables quick launch.
- Agni-V is a part of the Agni missile family. Agni-I has a range of 700 km, Agni-II 2,000 km, Agni-III 3,500 km and Agni-IV 4,000 km. All four have been deployed.
- The Defence Research and Development Organisation (DRDO) is developing Agni-VI capable of carrying multiple nuclear warheads.
- The Agni missiles were developed under the Integrated Guided Missile Development Programme (IGMDP), sanctioned by the government in July 1983.

Agni was planned as a technology demonstrator project as a re-entry vehicle, but was later converted into a ballistic missile.

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**India’s Agni V missile**

The nuclear warhead-enabled Agni V is the fifth in the series of medium and long-range missiles made in India in the past fifteen years.

**AGNI V**
- Operational range: 5,000 km
- Payload: 1,360.78 kg
- Height: 17 m
- Future development possible for a submarine-launched variant

**Agni V’s range**

<table>
<thead>
<tr>
<th>AGNI MISSILE SERIES</th>
<th>Range (km)</th>
<th>Payload (kg)</th>
<th>Height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agni I</td>
<td>700</td>
<td>1,000</td>
<td>15</td>
</tr>
<tr>
<td>Agni II</td>
<td>2,500</td>
<td>1,000</td>
<td>20</td>
</tr>
<tr>
<td>Agni III</td>
<td>3,000</td>
<td>1,500</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Sources: Indian Defense Research and Development Organisation, GlobalSecurity.org, Visual Motion

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**VAJIRAM & RAVI**

Current Affairs Quick Revision For 2017- (Dec 2016 to Feb 2017)
CULTURE

1. Thiruvalluvar statue unveiled in Haridwar.
   - The 12-foot-tall stone statue of renowned Tamil poet and philosopher-saint Thiruvalluvar was inaugurated at Mela Bhawan in Haridwar.
   - He is the author of the book ‘Tirukkural (also known as the Kural), a work on ethics. It is one of the most revered ancient literally work in Tamil Language.
   - Tirukkural is a classic Tamil sangam literature consisting of 1330 couplets or Kurals. The book is also called as the fifth Veda or ‘Bible of the Tamil Land’.

   - Eminent Rajasthani litterateur Dr Satya Narayan was chosen for the 26th Bihari Puraskar 2016 by the K K Birla Foundation. He was been chosen for his Hindi book titled Yeh Ek Dunia published in 2010.
   - The award was instituted in 1991 by the K K Birla Foundation. It is named after famous Hindi poet Bihari. It recognises outstanding work in Hindi or Rajasthani, published during the last ten years by a Rajasthani writer.

3. Thewa art
   - Thewa is a special art of jewelry making which involves embossing of intricately worked-out sheet gold on molten glass. It evolved in Pratapgarh district, Rajasthan India. Its origin dates back to the Mughal age.
   - Thewa is a traditional art of fusing 23K Gold with multicoloured glass. The glass is treated by a special process to have glittering effects, which in turn highlights the intricate gold work.
   - Thewa, an art that pulsates with life, caught seemingly in movement, in motifs used on jewellery, which shows the culture, heritage and tales of romance and valour of Rajasthan with nature and happiness depicting the art of the fine craftsmanship.
   - Nathu ji Soni invented the process. THEWA is a word from the local Rajasthani language which literally means “SETTING.”

4. Bidri art
   - Bidriware is a metal handicraft from Bidar. It was developed in the 14th century C.E. during the rule of the Bahamani Sultans. Allauddin Behman Shah, the second King of Bahmani Kingdom, is credited for introducing Bidri craft, a Middle Eastern art form.
   - The term "Bidriware" originates from the township of Bidar, which is still the chief centre for the manufacture of the unique metalware.
   - The metal used is a blackened alloy of zinc and copper inlaid with thin sheets of pure silver. This native art form has obtained Geographical Indications (GI) registry.
5. **Special Stamp on Freedom Fighter Gaya Prasad Katiyar released.**
   - Department of Posts has brought out a special stamp on **freedom fighter Gaya Prasad Katiyar**. Besides, it has unveiled a set of eight commemorative postage stamps on Personalities Series.
   - These include Dr Sachchidananda Sinha (lawyer and journalist), Karpoori Thakur (politician), Dashrath Manjhi (known for carving a path through a hillock using only a hammer and chisel), Vidyapati (Maithili poet), Kailashpati Mishra (politician), Kunwar Singh (freedom fighter), Phanishwar Nath Renu (writer) and Krishna Sinha (first Chief Minister of Bihar).

6. **President presents 2nd ICCR Indologist award to Prof. Yu Long Yu**
   - The **second Indian Council for Cultural Relations (ICCR) Indologist Award** for the year **2016** was awarded to **Prof. Yu Long Yu of China**.
   - He is Professor and Director at the Centre for Indian Studies, Shenzhen University. He has studied **Indology** for half a century and is the pioneer for Indology in South China.
   - He has set up the Centre for Indian Studies and Tan Yunshan Sino-Indian Friendship Museum in Shenzhen University.
   - The **first award** was presented to **Prof. Heinrich Freiherr Von Stietencron of Germany** in 2015.

7. **Google Doodle Paid tribute to Social Reformer Savitribai Phule on her birth anniversary**
   - She was the first **woman teacher of the first women's school in India** and a pioneer in modern Marathi poetry.
   - Savitribai taught in the school which she and her husband, **Jyotirao Phule**, started in **1848** with just nine students on the rolls.
   - Savitri set up a **care centre for widows** and even encouraged them to **remarry**. She also **fought for the rights of the untouchables**.
   - The **Government of Maharashtra** has instituted an **award in her name** to honour women social reformers. Also, a **stamp** was released by **India Post** in honour of Savitribai on **March 10, 1998**.

8. **UN declares 2017 as the International Year of Sustainable Tourism for Development.**
   - The declaration recalls the potential of tourism sector to advance the universal 2030 Agenda for Sustainable Development and 17 Sustainable Development Goals (SDGs)
9. 14th Pravasi Bhartiya Divas held in Bengaluru
   - The theme of this edition was “Redefining Engagement with the Indian Diaspora”. Dr. Antonio Costa is the chief guest in the PBD convention.
   - PBD is an annual event organised since 2003 by Ministry of External Affairs to foster greater interaction between the Indian Diaspora and Indian government.
   - It is held annually on 9 January to mark the return of Mahatma Gandhi from South Africa to India i.e. on 9 January, 1915.

10. Modi releases postage stamp on 100 years of Yogoda Satsang Math(YSS)
    - Yogoda Satsanga Society of India (YSS) is a non-profit religious organization founded by Paramahansa Yogananda in 1917, 100 years ago. A special postage stamp to commemorate the occasion was also released by Modi.
    - Paramahansa Yogananda is most noted for his book Autobiography of a Yogi which became an international bestseller and featured in the 100 Most Important Spiritual Books of the 20th Century

11. Pakistan to renovate Katas Raj Hindu Temple
    - Katasraj Mandir is a Hindu temple complex situated in Katas village near Choa Saidanshah in the Chakwal district of Punjab in Pakistan.
    - Dedicated to Shiva, the temple has, according to Hindu legend, existed since the days of Mahābhārata and the Pandava brothers spent a substantial part of their exile at the site and later Krishna himself laid the foundation of this temple and established his hand made Shivaling in it.
    - Temple was over 5,000 years old and had been the focal point of four civilisations. Al-Biruni, Persian scholar and polymath, had computed the earth’s circumference from here.

12. Kerala’s Nilambur teak to get GI tag
    - Kerala’s Nilambur teak known internationally for its superior timber quality and elegant appearance will be added to the list of Kerala produces with the Geographical Indication (GI) tag.
    - Nilambur was christened the Mecca of Teak. Due to its superior mechanical and physical properties as well as aesthetic appearance, the teak was exported to England and other parts of the world.
    - Produces from Kerala with GI tag: Pokkali rice, Vazhakulam Pineapple, Tirur Betel vine, Wayanadan rice varieties Jeerakasala and Gandhakasala, Central Travancore Jaggery and Chengalikodan Nendran, a banana variety.

13. UNESCO includes Yoga in Intangible Cultural Heritage list
    - Yoga, has been inscribed in the UNESCO’s list of Intangible Cultural Heritage of humanity during the 11th session of the Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage held in Addis Ababa, Ethiopia.
    - Yoga has become the 13th intangible cultural heritage that has been listed from India so far with UNESCO
• United Nation declares June 21st as the International Yoga Day in 2014.

• Others:
  3. Tradition of Vedic Chanting.
  8. Traditional brass and copper craft of utensil of Thatheras: Punjab.
  9. Chhau dance: classical Indian dance originated in the eastern Indian states.

14. Hornbill Festival begins in Nagaland
• A ten-day long Hornbill Festival started from December 1 at the Naga heritage village, Kisama.
• Also known as the ‘festival of festivals’.
• Hornbill Festival showcases a melange of cultural displays under one roof with an aim to revive and protect the rich culture of Nagaland and display its extravaganza and traditions.

15. Pre-historic camping site found in Ladakh
• Archaeological Survey of India (ASI) unearthed an ancient camping site dating 8500 BC has been found near Saser La in Nubra Valley, Ladakh Jammu and Kashmir. Saser La leads to the Karakoram Pass.
• The site, discovered 14,000 feet above the sea level, indicates that humans were camping in the area 10,500 years ago.
• The discovery was first noticed by Joint Director General S B Ota during a visit to Nubra valley.
• It was used for a seasonal settlement not a permanent settlement by hunters.

16. Dr. B R Ambedkar’s birth anniversary will be observed as Water Day
• Birth anniversary of the father of Indian Constitution B R Ambedkar (April 14), will be observed as “Water Day” in the country.
• The idea is to sensitise people about managing precious water resources.
• Ambedkar was a pioneer in the field of developing multi-purpose projects for independent India like Damodar Valley, Hirakud and other projects.
• According to research paper brought by central water commission on occasion of the Ambedkar's 125th birth anniversary in April, 2016.

17. English most powerful language in the world: WEF
• English has been ranked first in the top 10 most powerful languages in the world according to the 2016 World Power Language Index (PLI).
• The index was published by World Economic Forum (WEF).
• English is dominant language of 3 G7 nations (USA, UK and Canada).
• Indian language Hindi was ranked 10th in the 2016 PLI.

18. Rio de Janeiro accorded UNESCO world heritage status
• **Rio de Janeiro**, nicknamed the *Marvellous City*, officially entered the **UN’s list of world heritage sites in recognition of its soaring granite cliffs, urban rainforest and beaches.**
• UNESCO highlighted the “extraordinary fusion” of man-made and natural beauty in certifying Rio on the world heritage.
• The UNESCO status was announced in 2012, but only became official after the Brazilian authorities were given four years to report on their plans for protecting the likes of Flamengo Park, Sugarloaf Mountain, the Corcovado, and the Copacabana beach.

19. Renowned Tamil poet Thiruvalluvar’s statue unveiled in Haridwar
• The statue was inaugurated at the premises of *Mela Bhawan in Haridwar*.
• Thiruvalluvar is renowned *Tamil poet and philosopher-saint* believed to have lived between *3rd Century BC and 1st Century BC.*
• It is believed that he was born either in thirunainarkuruchi, a village in Kanyakumari District of Tamil Nadu or in Thiru Mylai (Mylapore) Chennai in Tamil Nadu.

20. Bengali poet Shankha Ghosh chosen for 2016 Jnanpith Award
• Bengali poet *Shankha Ghosh* has been chosen for the prestigious **52nd Jnanpith Award for 2016.**
• He is regarded a leading authority on Rabindranath. some of his *famous poems* are ‘Adim lata-gulmomay’, ‘Kabir abhipray’, ‘Murkha baro, samajik nay’, ‘Mukh dheke jay bigyapane’, ‘Babarer prarthana’, Dinguli Raatguli and ‘Nihita Patalchaya’
• Instituted in 1961, the award by *Bharatiya Jnanpith* recognises Indian *litersateurs* who write in one of the **22 Indian languages** listed in the Schedule Eight of the Indian Constitution.
• Last year the Jnanpith award was given to Gujarati writer *Raghuveer Chaudhary.*

21. 6,117 Kuchipudi dancers set new Guinness World Record
• Kuchipudi is one of the ten *major Indian classical dances*. It belongs to *Andhra Pradesh.*
• It is a dance-drama performance art. The Kuchipudi style was conceived by Siddhendra Yogi, a talented Vaishnava poet of 17th century.
• As many as *6,117 Kuchipudi dancers* set a new Guinness World Record by performing together in a single event in Vijayawada district of Andhra Pradesh.
• The Guinness World Record adjudicated for the **12-minute “Jayamu Jayamu” item** as the ‘Largest Kuchipudi dance’ performance.
• Jayamu Jayamu’ was chosen for the *Mahabrina Natyam* which was part of the 5th International Kuchipudi Dance Convention hosted by the Andhra Pradesh.
Miscellaneous

1. **2016: IAAF World Athlete of the year award**
   - International Association of Athletics Federations (IAAF).
   - **Usain Bolt** from Jamaica has been awarded the 2016 IAAF World Athlete of the Year award in male category for sixth time.
   - Almaz Ayana of Ethiopia won the award in women’s award category.

2. **International Children’s Peace Prize**
   - UAE-based Indian environmental activist girl **Kehkashan Basu** wins 2016 award for her fight for climate justice and combating environmental degradation.
   - She has founded her organisation Green Hope at the age of twelve, through which she has initiated countless cleanup operations and awareness campaigns.

3. **Global Talent Competitiveness Index (GTCI), 2017**
   - The GTCI is an annual report that measures how countries grow, attract and retain talent.
   - **Theme: Talent and Technology: Shaping the Future of Work.**
   - Switzerland and Singapore occupy the top spots; others in the top 10 include the United States (4th), Sweden (5th), Australia (6th), Luxembourg (7th), Denmark (8th), Finland (9th) and Norway (10th).
   - **India** has slipped 3 places to 92nd rank from last year’s 89th rank.
   - India’s ranking is worst among the five BRICS countries. While China at the 54th place, Russian Federation at 56th, followed by South Africa at 67th and Brazil 81st.

4. **Indian Railways approves first Rail Project in Andaman and Nicobar**
   - A 240-KM broad-gauge railway line connecting two major islands Port Blair in south with Diglipur on the north Andaman Island.
   - The line has tourism potential and is of “immense strategic value” to the defence forces because Diglipur is just 300 km by sea from the southern coast of Myanmar.
   - A broad-gauge train line from Port Blair to Diglipur will take three hours at the most.

5. **Sports Ministry launches Khelo India National level Competitions**
   - Khelo India is a National-level competition for various sports for Under-14 and Under-17 children.
   - The Delhi leg of the competitions, organised by Sports Authority of India, included swimming, cycling and wrestling.
Objective: To promote sports at grass-root level and create sports infrastructure in the country.

- It had provide a platform to the budding talents to compete at national level and Talent identification in the process for grooming them to achieve excellence at international level.


- India has been ranked 79th among 176 countries with Belarus, Brazil, & China.
- It is released by the Transparency International organisation.
- Its score marginally improved from 38 in 2015 to 40 in 2016. India had a score of 36 in 2012.
- The list was topped by New Zealand and Denmark with a score of 90 each.
- Higher-ranked countries tend to have higher degrees of press freedom, access to information about public expenditure, stronger standards of integrity for public officials, and independent judicial systems.
- Somalia was ranked the most corrupt country with a score of 10.

7. Kheleao: official mascot of FIFA U-17 World Cup unveiled

- 'Kheleao' a clouded leopard is mascot of FIFA U-17 World Cup.
- The clouded leopard is an endangered wild cat whose habitat extends from the Himalayan foothills to mainland Southeast Asia.
- “Mission 11 Million” FIFA had launched a programme to engage more than 11 million children in soccer-related activities.

8. India’s first Integrated Heliport inaugurated at Rohini in New Delhi

- Joint initiative of Civil Aviation Ministry and Pawan Hans
- The heliport consists of a terminal building with a capacity for 150 passengers, four hangars with parking capacities for 16 helicopters, and nine parking bays.
- The heliport will provide all helicopter operational facilities, de-congest the busy Indira Gandhi International Airport and also promote regional air connectivity.
- The heliport will also have services such as helicopter maintenance, disaster management, helicopter emergency medical services (HEMS) and law-and-order surveillance.

9. Hindi Scholar and writer Surendra Verma selected for 2016 Vyas Samman award

- He was chosen for this award for his novel Kaatna Shami Ka Vriksha: Padma Pankhuri Ki Dhar Se, published in 2010.
- The Vyas Samman award award was instituted by the K.K. Birla Foundation in 1991. It is awarded annually to outstanding literary work in Hindi.
10. 89th Academy awards

The award ceremony was held at the Dolby Theatre in Los Angeles.

**Best Picture** - 'Moonlight'
**Best Actress in a Leading Role** - Emma Stone for 'La La Land'
**Best Actor in a Leading Role** - Casey Affleck for 'Manchester By The Sea'
**Best Director** - Damien Chazelle for 'La La Land'
**Best Animated Feature** - 'Zootopia' by Byron Howard, Rich Moore and Clark Spencer
**Best Animated Short** - 'Piper' by Alan Barillaro and Marc Sondheimer
**Best Foreign Language Film** - 'The Salesman' by Asghar Farhadi
**Best Actress in a Supporting Role** - Viola Davis for 'Fences'