

**Answer & Explanation for G.S. Test-3 on Geography, History and Current Affairs
held on 10th December'2017**

Q1. Which of the following is the earliest prehistoric site discovered in India?

- A. Didwana
- B. Chopani Mando
- C. Bhimbetka
- D. Attirampakkam

Answer: D

Exp: Attirampakkam, a village near Chennai, is the earliest known stone tool site in India that was discovered by the British geologist Robert Bruce Foote in 1863. It opened the door for further research on the pre-historical studies in India.

Q2. In the context of Harappan Civilisation, what does R37 refer to?

- A. Cemetery
- B. Citadel Area
- C. Lower Town
- D. Great Granary

Answer: A

Exp: R37 is a primary burial site with skeletons found in extended position found at Harappa.

Q3. Match List-I with List-II and select the correct answer using the code given below:

- List-I
- A. Kalibangan
 - B. Lothal
 - C. Mohenjodaro
 - D. Dholavira

- List-II
- 1. Reservoir
 - 2. Ploughed Field
 - 3. Pasupati Seal
 - 4. Bead Factory

- A. 1:a 3:b 2:c 4:d
- B. 2:a 4:b 3:c 1:d
- C. 2:a 1:b 3:c 4:d
- D. 3:a 4:b 1:c 2:d

Answer: B

Exp: Bead making was an important industry at Lothal and a factory site has been reported from lower town area here.

Q4. Which of the following Rig Vedic God is associated with medicine and healing?

- A. Varun
- B. Agni
- C. Asvins
- D. Surya

Answer: C

Exp: Asvins, symbolizing sunrise and sunset, were supposed to bring happiness to men by averting sickness.

Q5. Consider the following religious concepts:

- 1. Aparigraha
- 2. Triratna

3. Syadavada

4. Kaivalya

Which of these are associated with Jainism?

A. 1 and 2 only

B. 3 only

C. 1, 3 and 4 only

D. 1, 2, 3 and 4

Answer: D

Exp: - Aparigraha is the virtue of non-possessiveness or non-greediness.

- Triratna – samyagdarshana (“right faith”), samyagjnana (“right knowledge”), and samyakcharitra (“right conduct”)

- Syadavada - doctrine that all judgments are conditional, holding good only in certain conditions, circumstances

- Kaivalya – enlightenment, supreme knowledge (in Jainism)

Q6. Which of the following is not represented in the pre-historic art of India?

A. Women with children

B. Honey collection

C. Dancing

D. Animal fights

Answer: D

Exp: None

Q7. Which of the following statements regarding Ashoka is not correct?

A. Ashoka after Kalinga war declared that he will make no war in future.

B. His Dhamma was a universal code of social and moral conduct.

C. He donated rock cut caves to Ajivika monks.

D. His peace policy was a major factor in the decline of the Mauryan empire.

Answer: D

Exp: The decline and disintegration of Mauryan empire is not the consequence of any single factor. Sub-continental empires like Maurya Empire decline because of various factors and forces and such decline is gradual.

Q8. The Buddhist Council that led to final division in Buddhism in two parts, Hinayana and Mahayana, was held at which of the following site?

A. Rajagriha

B. Srinagar

C. Vaishali

D. Pataliputra

Answer: B

Exp: The Fourth Buddhist Council was held at Kundalvana (presumed to be in or near Srinagar), Kashmir in 72 AD under the patronage of Kushan king Kanishka and the president of this council was Vasumitra, with Asvaghosa as his deputy. This council distinctly divided the Buddhism into 2 sects Mahayan & Hinayan.

Q9. Which one of the following features distinguishes Buddhism from Jainism?

A. Rejection of the authority of the Vedas.

B. Non-injury to living beings.

- C. Extreme form of conduct and self-mortification
- D. Belief in good action

Answer: C

Exp: Jainism believes in complete abstinence and self torture whereas Buddhism follows a middle-path, i.e. a path between self-indulgence and self-mortification.

Q10. What does the term Pattimokha in Buddhism stand for?

- A. Monastic rules and regulations for monks and nuns
- B. Buddha's leaving the palace to seek enlightenment
- C. Conversion of Angulimala by Buddha to his faith
- D. Attempts by evil forces to distract Buddha during his meditation

Answer: A

Exp: "Patti" means "towards" and "Mokha" means "liberation". These rules are specified in the first Pitaka known as Vinaya Pitaka.

Q11. Which among the following statements is/are correct?

1. The East India Company obtained Bombay from the king of England, Charles II.
2. The factory of Bombay was the first factory on the Western Coast, which the EIC had established.
3. The Mughal Emperor Jahangir (1605-27) gave permission to the EIC to establish their first factory in South India, which the company established at Masulipatnam.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1 and 2 only

Answer: A

Exp: - Bombay

- In 1543 AD, the Portuguese seized the isles from Bahadur Shah of Gujarat and they remained in their control until 1661. Following this period, the isles were ceded as dowry to Catherine de Braganza when she married Charles II of England. He, in turn, leased the isles to the East India Company during their colonization in 1668 and that's when the city was named Bombay.

- Surat was the first factory on the Western Coast.

- English traders frequently engaged in hostilities with their Dutch and Portuguese counterparts in the Indian Ocean. The company achieved a major victory over the Portuguese in the Battle of Swally in 1612, at Suvali in Surat. The company decided to explore the feasibility of gaining a territorial foothold in mainland India. In 1612, James I instructed Sir Thomas Roe to visit the Mughal Emperor Nuruddin Salim Jahangir to arrange for a commercial treaty that would give the company exclusive rights to reside and establish factories in Surat and other areas. In return, the company offered to provide the Emperor with goods and rarities from the European market.

- Masulipatnam.

- It was the Sultan of Golconda who gave the permission to establish factory at Masulipatnam. This is known as 'Golden Farman'.

- The company established its first factory in south India in the town of Machilipatnam on the Coromandel Coast

Q12. Consider the following statements:

1. The First Carnatic War came to an end after the defeat of the French forces in the battle of Wandiwash.
2. The internal turmoil in Carnatic and Hyderabad provided the opportunities to the English and the French Companies to meddle in their internal affairs and finally provoked the Second Carnatic War.
3. The Treaty of Paris provided that English factories would be returned to them, which they had earlier lost in the 3rd Carnatic War.

Which of the statements given above are incorrect?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Answer: C

Exp: Battle of Wandiwash marked the end of Third Carnatic War. This battle was a decisive battle in India during the Seven Years' War. The war concluded with the signing of the Treaty of Paris in 1763, which returned Chandernagore and Pondichéry to France, and allowed the French to have factories in India but forbade French traders from administering them. The French agreed to support British client governments, thus ending French ambitions of an Indian empire and making the British the dominant foreign power in India.

Q13. Which among the following were the measures adopted by the East India Company, after the battle of Plassey, that ruined the economy of Bengal?

1. The Company used its political power to dictate terms to the weavers of Bengal who were forced to sell their products at a cheaper price.
2. The Company eliminated its rival traders, both Indian and foreign, and prevented them from offering higher wages.
3. The East India Company imposed heavy duties on Indian goods in England.

Select the correct answer using the codes given below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Answer: A

Exp: The British Government and not the East India Company imposed duties on Indian goods in England.

Q14. Which among the following statements are correct regarding Ryotwari Settlement?

1. It was introduced by Alexander Reed and Thomas Munro.
2. It was introduced after the Revolt of 1857 in Southern India.
3. The land was measured and the peasants were issued patta.
4. The ryot did not have to pay land revenue when his produce was partially or wholly destroyed by drought or floods.

Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 1 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: B

Exp: The Ryotwari system was started by Alexander Reed in Bara-mahal in 1792 and was continued by Thomas Munro in 1801. Initially introduced in Madras province, it was also implemented in the Bombay province at a later stage. In this system, the land revenue was to be collected directly from the cultivators instead of being collected through intermediaries, as under the Zamindari system. But the new system did not establish peasant proprietorship as they were to pay the rent directly to the Government, which was supposed to be the owner of the land. The ryot had to pay revenue even when his produce was partially or wholly destroyed by natural disasters.

Q15. Which among the following work is not associated with Lord Dalhousie?

- A. Development and promotion of Railways.
- B. Widow Remarriage Act.
- C. Doctrine of Lapse.
- D. Establishment of Universities at Bombay, Calcutta and Madras.

Answer: D

Exp: In accordance with "Wood's despatch" in 1854, these Universities were established in 1857. Hindu Widow Remarriage Act 1856 legalised the remarriage of Hindu widows in all jurisdictions of India under East India Company rule. It was enacted in response to the campaign of Pandit Ishwar Chandra Vidyasagar.

Q16. Which among the following are reflected in Moderates' ideology?

- 1. They believed in constitutional and legal means.
- 2. They dissociated themselves from social reforms, within the Congress.
- 3. Absence of mass-mobilisation.
- 4. They believed in the providential nature of the British Rule.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: D

Exp: None

Q17. Which among the following statements are correct regarding Subsidiary Alliance?

- 1. It was introduced by Lord Wellesely.
- 2. Hyderabad and the State of Mysore accepted Subsidiary Alliance offered by the Governor-General.
- 3. By signing Subsidiary Alliance, an Indian ruler lost the right of maintaining diplomatic relations with other states.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Answer: D

Exp: This system was framed by Lord Wellesley, British Governor-General in India from 1798 to 1805. Early in his governorship, Wellesley adopted a policy of non-intervention in the princely

states, but he later adopted the policy of forming subsidiary alliances, which played a major role in the expansion of British rule in India. Hyderabad in 1798 and Mysore in 1799 signed Subsidiary Alliance respectively.

An Indian ruler entering into a subsidiary alliance with the British would accept British forces within his territory and to pay for their maintenance.

- The ruler would accept a British official (resident) in his state.
- The ruler who entered into a subsidiary alliance would not join any alliance with any other power or declare war against any power without the permission of the British.
- The ruler would dismiss any Europeans other than the British and avoid employing new ones.
- The ruler would let the British rule on any conflict with any other state.
- The ruler would acknowledge the East India Company as the paramount power in India.
- The ruler would have his state be protected by the Company from external dangers and internal disorders.
- If the rulers failed to make the payments that were required by the alliance, part of their territory would be taken away as a penalty.
- Indian rulers had to maintain British troops in his state.

Q18. Which among the following pairs is/are correctly matched?

1. Sambad Kaumudi - Raja Rammohan Roy
2. Amrit Bazar Patrika - Motilal and Sishir Kumar Ghosh
3. Tuhfat-ul-Muwaideen - Syed Ahmad Khan

Select the correct answer using the code given below:

- A. 1 and 3 only
- B. 1 and 2 only
- C. 1, 2 and 3
- D. None of the above

Answer: B

Exp: Tuhfat-ul-Muwaideen was published by Raja Rammohan Roy. Sir Syed Ahmad Khan started Aligarh Institute Gazette in 1866. He also published a journal called Tehzeeb-ul-Akhlaq.

Q19. Consider the following statements:

1. An Act for the better control of publications in Oriental Languages was enacted by Lord Curzon.
2. This Act was repealed by Lord Minto in 1910.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: This was introduced in 1878 by Lord Lytton. This Act was popularly known as Vernacular Press Act. It was enacted to curtail the freedom of the Indian press and prevent the expression of criticism toward British policies—notably, the opposition that had grown with the outset of the Second Anglo-Afghan War (1878–80). The Act excluded English-language publications as it was meant to control seditious writing in 'publications in Oriental languages' everywhere in the country, except for the South. It was repealed by Lord Ripon in 1882.

Q20. Which among the following leaders was/were not associated with Indian Association?

1. Surendranath Banerjee
2. Anand Mohan Bose
3. Gopal Krishna Gokhale

Select the correct answer using the code given below:

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

Answer: C

Exp: - Indian Association was the first avowed nationalist organization founded in British India by Surendranath Banerjee and Ananda Mohan Bose in 1876.

- Servants of India Society, was founded by Gopal Krishna Gokhale in 1905 to unite and train Indians of different ethnicities and religions in welfare work. It was the first secular organization in that country to devote itself to the underprivileged, rural and tribal people, emergency relief work, the increase of literacy, and other social causes.

Q21. Which among the following statements are correct?

1. The Charter Act of 1853 provided open competition for Indian Civil Services Examination.
2. The first examination for ICS was held in London in 1855.
3. Surendranath Banerjee was the first Indian to qualify the ICS examination.
4. During the period of Lord Lytton, the maximum age for ICS was reduced to 19 years.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2 and 4 only
- D. 2, 3 and 4 only

Answer: C

Exp: The Charter Act of 1833 had laid down that the Court of Directors should nominate as many candidates, from whom one should be selected by competitive examination. The Charter Act of 1833 also provided that Haileybury College of London should make quota to admit the future civil servants. However, this system of an open competition was never effectively operated. The Charter Act of 1853 deprived the Court of Directors of its right of Patronage to Indian appointments and now it was to be exercised under the regulations. This was the birth of Civil Services which was thrown in 1854 for open competition.

- The first Indian to qualify was S.N. Tagore. He was the second son of Debendranath Tagore and elder brother of Rabindranath Tagore. Satyendranath was selected for the Indian Civil Service in 1863. Satyendranath was posted to Bombay Presidency. There he developed close contacts with many of the leading reformers and Prarthana Samaj figures — Mahadev Govind Ranade, Kashinath Trimbak Telang, Ramakrishna Gopal Bhandarkar and Narayan Ganesh Chandavarkar. He also translated Bal Gangadhar Tilak's Geetarahasya and Tukaram's Abhang poems into Bengali.

Q22. Which among the following were the reasons for the Revolt of 1857?

1. The British Government's policy of enacting social and religious legislations.
2. The annexation of Awadh by Lord Dalhousie in 1856.
3. The abolition of foreign service allowance (bhatta) by the Government.
4. Introduction of Enfield Rifles which used greased cartridges.

Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 2, 3 and 4 only
- C. 1, 2 and 4 only
- D. 1, 2, 3 and 4

Answer: D

Exp: None

Q23. Which among the following statements are correct?

1. Pitt's India Act of 1784 established a Board of Control, in London.
2. In India, the members of Governor-General's Executive Council were reduced from four to three.
3. It provided for the establishment of a Supreme Court at Calcutta.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Answer: A

Exp: Supreme Court was established by the Regulating Act of 1773.

Q24. Which among the following statements is/are correct regarding the Charter Act of 1833?

1. It introduced legislative decentralization, whereby provincial governments could enact laws on their own.
2. It provided for the establishment of a Law Commission to codify and strengthen Indian laws.
3. It laid down a provision that the Company's government should spend Rupees one lakh annually for promoting education in British India.

Select the correct answer using the code given below:

- A. 2 only
- B. 1 only
- C. 1 and 3 only
- D. 1 and 2 only

Answer: B

Exp: - It introduced legislative centralization.

- Charter Act of 1813 made a provision of spending 1 lakh rupee annually.

Q25. Consider the following statements:

1. The first jute mill was started in Bombay in 1853 by Cowasjee Nanabhoy.
2. The first textile mill was started in Rishra in Bengal in 1855.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: First Jute Mill was in Rishra (Bengal).

First Cotton Mill was in Bombay.

Q26. Which among the following statements are correct regarding the First Factory Act, 1881?

1. It was passed by Lord Ripon.
2. It prohibited the employment of children below the age of 7 years in factories.
3. It provided for a weekly holiday for all workers.
4. The Act also provided for the proper fencing off of dangerous machinery.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 3 and 4 only
- C. 2 and 4 only
- D. 1, 2 and 4 only

Answer: D

Exp: - Weekly holiday was provided by Factory Act of 1891.

- The first Factories Act was adopted in 1881. The Factory Commission was appointed in 1885.

- There was another Factories Act in 1891, and a Royal Commission on Labour was appointed in 1892.

Q27. Which among the following statements is/are correct?

1. Dayanand Saraswati was originally born as Moolshankar in a Brahmin family of Gujarat.
2. He established a revivalist movement known as Arya Samaj in 1875 at Bombay.
3. To preach his ideas, he published Satyarth Prakash in 1875 in Hindi.
4. The Arya Samaj was one of the most influential movements in Northern and Central India against Caste-Orthodoxy.

Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 2, 3 and 4 only
- C. 1, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: D

Exp: None

Q28. Which among the following organizations took up the issue of reduction of maximum age for civil services?

- A. East India Association
- B. Indian National Congress
- C. Bombay Presidency Association
- D. Indian Association

Answer: D

Exp: This organisation was established by S.N. Banerjee and A.M. Bose.

Q29. Which among the following statements are correct regarding Dadabhai Nauroji?

1. He is known as Grand Old Man of India.
2. He had been the President of the Indian National Congress thrice.
3. As President of Bombay Session (1905) of the Indian National Congress, he demanded self-rule under British Empire.
4. He was one of the first leaders to point out the economic drain from India.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 2 and 4 only
- C. 1, 2 and 4 only

D. 1, 2, 3 and 4

Answer: C

Exp: - As President of Calcutta Session (1906) he demanded Swaraj.

- 2017 was his death centenary

- He was a Liberal Party Member of Parliament in the UK House of Commons between 1892 and 1895, and the first Asian to be a British MP. He was also a member of the Second International.

Q30. Which among the following statements are correct regarding Syed Ahmad Khan?

1. He established Muhammedan Anglo-Oriental College in 1875 at Aligarh, which later transformed as AMU.

2. He initiated a liberal social reform within the Muslim Society and criticized evils like purdah, polygamy etc.

3. In the later phase of his life, he became critical of Indian National Congress.

Select the correct answer using the code given below:

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

Answer: D

Exp: - Sir Syed Ahmad Khan's ambitious undertaking was the foundation of the Scientific Society, which published translations of many educational texts and issued a bilingual journal—in Urdu and English. At about the same time a movement started at Benares to replace Urdu with Hindi. It convinced Sayyid that the paths of the Hindus and the Muslims must diverge. A Muslim school was established at Aligarh in May 1875, and, after his retirement in 1876, Sayyid devoted himself to enlarging it into a college. In January 1877 the foundation stone of the college was laid by the Viceroy.

- Sayyid advised the Muslims against joining active politics and to concentrate instead on education. Later, when some Muslims joined the Indian National Congress, he came out strongly against that organization and its objectives, which included the establishment of parliamentary democracy in India. He argued that, in a country where communal divisions were all-important and education and political organization were confined to a few classes, parliamentary democracy would work only inequitably. In 1886 Sayyid organized the All-India Muhammadan Educational Conference, which met annually at different places to promote education and to provide the Muslims with a common platform. Until the founding of the Muslim League in 1906, it was the principal national centre of Indian Muslims.

Q31. Cow protection movement in modern India started soon after 1857. Its earlier roots are traced to the Sikh activism in 1860s in Punjab. However, by the 1880s, the movement became popular and spread all over India. The most prominent leader of cow protection movement in the late 19th century was –

A. Swami Dayanand Saraswati

B. Swami Vivekanand

C. Mahatma Gandhi

D. Swami Shraddhanand

Answer: A

Exp: Arya Samaj and its founder Dayananda Saraswati were one of the early supporters of the cow protection movement. Dayananda Saraswathi published the Gokarunanidhi (Ocean of

mercy to the cow) in 1881. It strongly opposed cow slaughter. In the early 20th century, Mahatma Gandhi and Madammohan Malaviya supported the cow protection while post-independence, the cause was strongly upheld by Vinoba Bhave.

Q32. Although the Right to Education Act was enacted in 2009, its roots are traced to the colonial era debates and also the demands of the Indian national movement. The idea was first clearly enunciated by

- A. Gokhale's Resolution in 1910 in Legislative Council
- B. Gandhi's Wardha Education Scheme
- C. Nehru's Karachi Resolution on fundamental rights
- D. Woods Dispatch 1854

Answer: A

Exp: As a member of the Legislative Council Gokhale put forward a proposal for compulsory primary education in 1910. The proposal was as follows— "A beginning should be made in the direction of making elementary education free and compulsory throughout the country, and that a mixed commission of officials and non officials be appointed at an early date to frame definite proposal." As a reaction to Gokhale's resolution, the Government assured him that the subject would receive careful consideration. Consequently Gokhale withdraw his resolution. Later on, the Government accepted resolution only partly. A department of Education was established under the Central Government and the secretary was also appointed. The record of the progress of primary education also started to be published by the Government. But the main issue of making primary education free and compulsory remained neglected and unattended by the Government.

Q33. Consider the following about Birsa Munda, the undisputed and charismatic leader of the Munda Ulgulan

1. Although Birsa was a Vaishnavite for most part of his life, his ideas were also influenced by Christianity in his formative years
2. Before launching the Ulgulan, Birsa proclaimed a new religion with himself as the messenger of the God.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: Munda Rebellion is one of the prominent 19th century tribal rebellions in the subcontinent. Birsa Munda led this movement in the region south of Ranchi in 1899-1900. The Ulgulan, meaning 'Great Tumult', sought to establish Munda Raj and independence. Birsa Munda (1874-1900), the son of a sharecropper who had received some education from the missionaries came under Vaishnava influence and in 1893-94 participated in a movement to prevent village wastelands from being taken over by the Forest Department. In 1895 Birsa, claiming to have seen a vision of god, proclaimed himself a prophet with miraculous healing powers. Thousands flocked to hear the 'new word' of Birsa with its prophecy of an imminent deluge. The new prophet became a critic of the traditional tribal customs, religious beliefs and practices. He called upon the Mundas to fight against superstition, give up animal sacrifice, stop taking intoxicants, to wear the sacred thread and retain the tribal tradition of worship in the sarna or the sacred grove. It was essentially a revivalist movement, which sought to purge Munda society of

all foreign elements and restore its pristine character. Christianity influenced the movement as well and it used both Hindu and Christian idioms to create the Munda ideology and worldview.

Q34. Mahatma Gandhi spent his early years in South Africa. His experiences and activities there shaped his worldview as well as leadership style. In this context consider the following statements:

1. He returned to India with his family in 1901 and even opened a law office in Bombay. However, he had to return to South Africa on the request of the Indian community in 1902.
2. With the outbreak of the Boer war in 1899, Gandhiji enlisted himself and also organized the Indian Ambulance Corps for the British.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: With the outbreak of the Boer war in 1899, Gandhiji enlisted 1100 Indians and organized the Indian Ambulance Corps for the British. In spite of the Indian support, the Transvaal Asiatic Department continued its anti-Indian regulations. Gandhiji chose to support the British as he felt, "The authorities may not always be right but as long as the subjects owe allegiance to the state, it is their clear duty to...accord their support." By 1901, he returned to India with his family. He travelled extensively in India and even opened a law office in Bombay. However, South African Indians refused to part with him. He had to return to South Africa on the request of the Indian community in 1902.

Q35. Maharaja Sayajirao Gaekwad, the Maharaja of Baroda princely state in the latter half of the 19th century was known as a wise and patriotic Maharaja. Of many of his activities, consider the following

1. His educational and social reforms included – a ban on child marriage, legislation of divorce, removal of untouchability, spread of education and development of Sanskrit.
2. The persons he patronized later came to play huge role in Indian politics. The list includes – Babasaheb Ambedkar, Sri Aurobindo and Dadabhai Naoroji.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: He was the Maharaja of Baroda State from 1875 to 1939, and is notably remembered for reforming much of his state during his rule. On assuming the reins of government, some of his first tasks included education of his subjects, uplifting of the downtrodden, and judicial, agricultural and social reforms. He played a key role in the development of Baroda's textile industry, and his educational and social reforms included among others, a ban on child marriage, legislation of divorce, removal of untouchability, spread of education, development of Sanskrit, ideological studies and religious education as well as the encouragement of the fine arts. He was the first Indian ruler to introduce, in 1906, compulsory and free primary education in his state, placing his territory far in advance of contemporary British India. His economic development initiatives included the establishment of a railroad and the founding in 1908 of the

Bank of Baroda, which still exists and is one of India's leading banks, with numerous operations abroad in support of the Gujarati diaspora.

Q36. India celebrated the 150th birth anniversary of Sister Nivedita in 2017. Consider the following statements about her –

1. Originally born as Margaret Elizabeth Noble in Ireland, she came to India in the late 19th century after being impressed by Swami Vivekanand's work
2. She was a lifelong member of Ramkrishna Mission and was closely associated with activities throughout India.
3. She encouraged and supported Jagdish Chandra Bose to carry out scientific research.

Which of the statements given above is/are incorrect?

- A. 1 only
- B. 2 only
- C. 3 only
- D. None of the above

Answer: B

Exp: She was an Irish-born schoolteacher who was a follower of the Indian spiritual leader Vivekananda (Narendranath Datta) and became an influential spokesperson promoting Indian national consciousness, unity, and freedom.

Noble met Vivekananda when he visited England in 1895, and she was attracted to the universal principles of Vedanta and to Vivekananda's humanistic teachings. Accepting him as her guru (spiritual teacher) before he left England in 1896, she worked for the Vedanta movement in England until she went to India in 1898. She went to India primarily to help Vivekananda realize his plans to educate women, and she opened a small school at Calcutta (now Kolkata) in Bengal, where she tried to blend Indian traditions with Western ideas.

Following Vivekananda's death in 1902, Nivedita turned her attention more toward India's political emancipation. She objected strongly to the partition of Bengal in 1905 and, as part of her deep involvement in the revival of Indian art, supported the swadeshi movement. She was closely associated with the Ramkrishna Mission but because she was also a leader of Indian national movement, she had to publically dissociate herself from the Mission which focused on spiritual and social issues only. The poet Rabindranath Tagore, one of her close friends, summed up that sentiment when, after her death, he referred to her as the "mother of the people."

Q37. Consider the following statements regarding Jyotiba Phule :

1. He aimed at modification, not abolition, of the Varna system.
2. He dedicated his book 'Gulamgiri' to the African American movement to end slavery.
3. First indigenously run school for girls was opened by him at Pune.

Which of the statements given above is/are correct?

- A. 1 and 3 only
- B. 3 only
- C. 1, 2 and 3
- D. 2 and 3 only

Answer: D

Exp: Mahatma Phule aimed at complete abolition of the Varna system. He dedicated his book to the African American movement for Slavery. With the help of his wife, Savitribai Phule, he opened the first indigenously run school for girls at Pune.

Q38. With reference to the social and religious reform movements of 19th century, consider the following statements

1. The reformers of the 19th century believed in complete westernization of the society.
2. The Rahnumai Mazdayasnan Sabha was set up by English- educated Muslims to reform the social conditions of Muslim women.
3. Radhakant Deb organized Dharma Sabha to counter the ideas of Brahmo Samaj.
4. Indian Social Conference founded by M.G. Ranade and Raghunath Rao was known as the social reform cell of the Congress.

Which of the statements given above are correct?

- A. 1 and 4 only
- B. 1, 2 and 3 only
- C. 2 and 3 only
- D. 3 and 4 only

Answer: D

Exp: The reformers of the 19th century did not believe in blind imitation of western ideas. They believed in modernization, rather than westernization of Indian society.

The Rahnumai Mazdayasnan Sabha was founded by English-educated Parsis to improve the social condition of the people of their community.

Radha Kant Deb organized Dharma Sabha to counter the liberal ideas of Brahmo Samaj regarding abolition of Sati etc.

Indian Social Conference met annually at the same time and venue as the Indian National Congress since 1887. It focussed attention on social issues and advocated inter-caste marriages, monogamy etc.

Q39. Consider the following statements regarding constitutional progress in 19th century India:

1. Indian Council Act of 1861 is known as Act for the Good Government of India.
2. The Act of 1861 made a beginning of representative institutions by associating Indians with the law making process.
3. The Act of 1892 made a limited and indirect use of election in filling some of the seats in central and provincial councils.
4. The Secretary of State-in-Council was created by the Act for the Good Government of India.

Select the correct answer using the code given below:

- A. 1 and 4 only
- B. 2, 3 and 4 only
- C. 2 and 4 only
- D. 1, 2, 3 and 4

Answer: B

Exp: The Indian Council Act of 1858 enacted in the aftermath of the revolt of 1857 is known as the Act for the Good Government of India.

The Act of 1861 provided that the Viceroy should nominate some Indians as non-official members of his expanded council. Lord Canning in 1862 nominated three Indians to his legislative Council.

The Act of 1892 introduced indirect elections in India. However the word "election" was not used in the Act

The Act of 1858 made the Secretary of State-in-Council as a body corporate, which was capable of suing and being sued in India and England.

Q40. Consider the following statements in the context of aims and objectives of Indian National Congress at its formation in 1885:

1. To develop a feeling of national unity among the masses, irrespective of region, caste, province.
2. To formulate and present popular demands before the government addressing the common economic, political and social issues.
3. To undertake social and religious reforms in order to guide the society in a progressive direction.
4. To employ legitimate and peaceful means for the acceptance of its demands.

Select the correct answer using the codes given below:

- A. 1 and 2 only
- B. 1 only
- C. 2 and 3 only
- D. 3 and 4 only

Answer: B

Exp: The Indian National Congress in the initial period of its formation kept itself aloof from social and religious issues. It took up political and economic issues. INC did not take up social and religious reforms before coming of Mahatma Gandhi. It was only at the behest of Gandhiji that the INC changed its aim to employ legitimate and peaceful means in 1920.

Q41. Match List I with List II and select the correct answer using the code given below the lists:

List-I (City)	List-II (River)
A. Khartoum	1. Niger
B. Port Harcourt	2. Mississippi-Missouri
C. Port Matadi	3. Nile River
D. St. Louis	4. Congo

- A. 3:a 2:b 4:c 1:d
- B. 4:a 1:b 3:c 2:d
- C. 3:a 1:b 4:c 2:d
- D. 4:a 2:b 3:c 1:d

Answer: C

Exp: • Khartoum is the capital and largest city of Sudan. It is located at the confluence of the White Nile, flowing north from Lake Victoria, and the Blue Nile, flowing west from Ethiopia. The location where the two Niles meet is known as "al-Mogran". The Nile is a major north-flowing river in northeastern Africa. The Nile, which is 6,853 km (4,258 miles) long, is the second longest river in the world. The Nile has two major tributaries, the White Nile and Blue Nile.

• Port Harcourt is the capital and largest city of Nigeria. It is located in the Niger river delta. Niger river is the principal river of western Africa, extending about 4,180 km (2,600 mi). Its drainage basin is 2,117,700 km² (817,600 sq mi) in area. The Niger is the third-longest river in Africa, exceeded only by the Nile and the Congo River (also known as the Zaïre River).

• Port Matadi is the chief sea port of the Democratic Republic of the Congo (DRC). Matadi is situated on the left bank of the Congo River. The Congo River (also known as the Zaire River) is the second longest river in Africa (length of 4,700 km (2,920 mi)) after the Nile and the second largest river in the world by discharge volume of water (after the Amazon), and the world's deepest river with measured depths in excess of 220 m (720 ft). Congo crosses the equator twice.

• St. Louis is a major U.S. port in the state of Missouri, built along the western bank of the Mississippi River. The Mississippi River is the chief river of the North American continent. Its

source is in northern Minnesota and it flows generally south for 3,730 km (2,320 miles) to the Mississippi River Delta in the Gulf of Mexico.

Q42. Which of the following pairs is correctly matched?

Geographical Feature	Region
A. Kalahari Desert	– North Africa
B. Atlas Mountains	– Northwest Africa
C. Guiana Highlands	– Southwest Africa
D. Okavango Basin	– Patagonia Desert

Answer: B

Exp: • The Kalahari Desert is a featureless, gently undulating, sand-covered plain of the interior plateau of Southern Africa. The kopjes (small hills in a generally flat area), sand sheets, longitudinal dunes, and vleis (pans) are features that characterize the Kalahari desert.

• Atlas Mountains, series of mountain ranges in northwestern Africa, running generally southwest to northeast. The northern section, which run from west to east is the Tell Atlas. The southern section, which is subject to desert influences, is appropriately called the Saharan Atlas. The Tell Atlas and the Saharan Atlas merge in the west into the long folds of the Middle Atlas and in the east join together in the Tébessa and Medjerda mountains.

• Guiana Highlands, plateau and low-mountain region of South America located north of the Amazon and south of the Orinoco River. The whole region receives an abundance of rainfall, and no season is really dry. The vegetation is mostly tropical rainforest, but parts of southern Venezuela and Guyana are savanna. The most notable natural landmark in the highlands is Angel Falls, the world's highest waterfall of height 979 metres (3,212 feet).

• Okavango River, also called Kubango River, fourth longest river system in southern Africa, running basically southeastward for 1,600 km (1,000 miles) from central Angola to the Kalahari (desert). So, Okavango Basin is part of Kalahari Desert. The river terminates in an immense inland delta known as the Okavango Swamp.

Q43. Consider the following statements:

1. River Tigris and Euphrates meet at Shatt-al-Arab in Iran.
2. Amu Darya and Syr Darya are the principal rivers of Central Asia.

Which of the statement/s given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: The Tigris and Euphrates, with their tributaries, form a major river system in Western Asia. The rivers flow in a south-easterly direction through the central plain and combine at Al-Qurnah to form the Shatt al-Arab river and discharge into the Persian Gulf.

Amu Darya and the Syr Darya, are the Principal Rivers of Central Asia that flow into the Aral Sea and form the Aral Sea Basin. Both rivers are fed mainly by snow and glacier melt in the high mountain regions of Kyrgyzstan, Tajikistan and Afghanistan.

Q44. Which of the following pairs is/are correctly matched?

Geographical Feature	Region
1. Rub al Khali	Arabian Peninsula
2. Mt. Denali	Alaska
3. Valdes Peninsula	West Asia
4. Okavango Basin	Patagonia Desert

Select the correct answer using the code given below:

- A. 2 and 3 only
- B. 1 and 4 only
- C. 1 and 2 only
- D. 1, 2 and 3 only

Answer: C

Exp: • Rub al-Khali, is vast desert region in the southern Arabian Peninsula, constituting the largest portion of the Arabian Desert. The Rub' al-Khali is the largest area of continuous sand in the world. It occupies more than one-fourth of Saudi Arabia's total area and features varied topography. In the west the elevation is as high as 2,000 feet (610 metres) above sea level and the sand is fine and soft, while in the east the elevation drops to about 600 feet (180 metres), with sand dunes, sabkhas (salt flats), and sand sheets.

• Mt. Denali (also known as Mount McKinley) is the highest mountain peak in North America, with a summit elevation of 20,310 feet (6,190 m) above sea level. It is Located in the Alaska Range in the interior of the U.S. state of Alaska. Denali is a granitic pluton lifted by tectonic pressure from the subduction of the Pacific Plate beneath the North American Plate.

• The Valdes Peninsula, is part of Argentina and is into the Atlantic Ocean.

• Okavango River, also called Kubango River, fourth longest river system in southern Africa, running basically southeastward for 1,600 km (1,000 miles) from central Angola to the Kalahari (desert). So, Okavango Basin is part of Kalahari Desert. The river terminates in an immense inland delta known as the Okavango Swamp.

Q45. There are two statements labelled as Assertion A. and Reason (R).

Assertion (A): The bluer the sky, the cleaner the air.

Reason (R): Gas molecules more effectively scatter the longer wavelengths.

Mark your answer as

- A. if both A and R are true and R is the correct explanation of A
- B. if both A and R are true but R is not the correct explanation of A
- C. if A is true but R is false
- D. if A is false but R is true

Answer: C

Exp: • Gas molecules more effectively scatter the shorter wavelengths (blue and violet) of visible light than the longer wavelengths (red and orange). This is why sky appears blue.

• Large particles associated with haze, fog, or smog scatter light more equally in all wavelengths. Because no colour is pre-dominant over any other, the sky appears white or gray on days when large particles are abundant.

Q46. Consider the following statements:

- 1. The cirrus cloud is composed largely of ice-crystals.
- 2. Drizzle is associated with low and thin stratus clouds.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only

- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: • High clouds are mainly cirrus. Cirrus (cloud classification symbol: Ci) is a genus of atmospheric cloud generally characterized by thin, wispy strands, giving the type its name from the Latin word cirrus, meaning a ringlet or curling lock of hair. In high clouds temperatures go lower than -40 degrees C and thus it is largely composed of ice-crystal. Cirrus clouds only produce fall streaks (falling ice crystals that evaporate before landing on the ground).

• Stratus clouds are low-level clouds characterized by horizontal layering with a uniform base. In a low, thin stratus cloud, the journey of a droplet is short lived and chances for collisions and growth are very less. Stratus clouds may produce a light drizzle or a small amount of snow.

Q47. Consider the following statements:

1. Southern Oscillation represents a Walker Cell.
2. Walker Cell circulations form part of Hadley Cell.
3. Horse latitudes form the wet branch of Hadley Cell.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

Answer: A

Exp: • The term Walker Cell refers to any east-west pressure difference and the related air circulation. According to this model, parcels of air follow a closed circulation in the zonal and vertical directions.

• Southern Oscillation is a coherent inter-annual fluctuation of atmospheric pressure over the tropical Indo-Pacific region. It refers to see-saw arrangement of atmospheric pressure conditions between the Pacific Ocean and Indian ocean. The Southern Oscillation is the atmospheric component of a single large-scale coupled interaction called the El Niño/Southern Oscillation (ENSO). Southern Oscillation Index (SOI), compares the difference in atmospheric pressure over Australia and Indonesia with that of the eastern South Pacific.

• Meridional circulation: General circulation of the atmosphere includes both, the horizontal and vertical components of atmospheric circulation. Meridional flow is a general air flow pattern from north to south, or from south to north, along the Earth's longitude lines (perpendicular to a zonal flow). Three cell model of meridional circulation of the atmosphere, where it is believed that there is cellular circulator of the air at each meridian (latitude). Thus, each meridian has three cells of air circulation in the northern hemisphere i.e. 1. Tropical cell or Hadley cell, 2. Polar front cell or mid-latitude cell or Ferrel cell, and 3. Polar or subpolar cell.

• Horse latitudes represent the dry section of Hadley Cell, here the air descends and hence clouds are not formed.

Q48. Consider the following statements:

1. The I.T.C.Z. is characterized by thunderstorms.
2. The I.T.C.Z. promotes the formation of tropical cyclones.
3. The I.T.C.Z. is characterized by strong trade winds.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only

C. 1 and 2 only

D. 1, 2 and 3

Answer: C

Exp: • The Inter Tropical Convergence Zone (ITCZ), is a belt of low pressure where the trade winds of the Northern and Southern Hemispheres come together. It is characterised by convective activity which generates often vigorous thunderstorms over large areas. Since water has a higher heat capacity than land, the ITCZ propagates poleward more prominently over land than over water, and over the Northern Hemisphere than over the Southern Hemisphere. The position of the ITCZ varies with the seasons and circles the Earth generally near the equator.

- It is a zone of calm and weak winds as it lacks pressure gradient.

- As ITCZ with low pressure shifts away from the equator, there is enough Coriolis force for cyclonic curvature of winds.

Q49. Consider the following statements:

1. Kiribati is on the east of International Date Line.

2. Southern Line Islands of Kiribati are among the first to enter a new year.

Which of the statements given above is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

Answer: B

Exp: • The Republic of Kiribati is a country in the central Pacific Ocean and comprises 33 atolls and reef islands and one raised coral island. Their spread straddles both the equator and the 180th meridian. Kiribati lies on west of I.D.L. and therefore the southern Line Islands of Kiribati are among the first to experience the beginning of a new year.

- A new day starts at the IDL and travels east to west.

Q50. In which of the following zones in the atmosphere (in terms of height (kilometres) from the earth's surface), the positively charged ions and negatively charged electrons are most dense?

A. 12 to 50

B. 50 to 80

C. 80 to 400

D. 400 to 1000

Answer: C

Exp: Part of Ionosphere (80 to 400 Km) has densely charged particles. The concentration of ion is not great below this zone because much of the short wavelength radiation needed for ionization has already been depleted. And above this zone the density of air is very low.

Q51. Consider the following statements:

1. Earth's surface approaches being a blackbody.

2. Sun approaches being a blackbody.

3. Objects that are good absorbers of radiation are also good emitters.

4. The average albedo of moon is much more than that of earth.

Which of the statements given above are correct?

A. 1 and 2 only

B. 1, 2 and 3 only

C. 2, 3 and 4 only

D. 1, 3 and 4 only

Answer: B

Exp: • A blackbody is any object that radiates, for every wavelength, the maximum intensity of radiation possible for that temperature. Earth's surface and sun approach being blackbodies (perfect radiators) because they absorb and radiate with nearly 100 per cent efficiency for their respective temperatures.

- Albedo is the measure of diffusive reflection of solar radiation out of the total solar radiation received by a body, for example a planetary body such as Earth.
- The average albedo of moon is about 7% whereas the average albedo of earth is about 32%. It is so because moon does not have an atmosphere.

Q52. Consider the following statements:

1. Angle at which the Sun's rays strike the earth's surface.
2. The length of daylight.

Which of the above account(s) for the variation in the amount of solar energy reaching a particular location?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: While the solar radiation incident on the Earth's atmosphere is relatively constant, the radiation at the Earth's surface varies widely due to:

- Atmospheric effects, including absorption and scattering;
- Local variations in the atmosphere, such as water vapour, clouds, and pollution;
- Latitude of the location (i.e. Angle at which the Sun's rays strike the earth's surface)
- The season of the year and the time of day (The length of daylight). The length of a day varies as we go from equator to the poles and it varies at a place (except at equator) during the year.

Q53. Consider the following statements:

1. Stations located in the mountains have a greater daily temperature range than do stations at lower elevations.
2. Clouds reduce the daily temperature range.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: • With an increase in altitude, the intensity of insolation increases, resulting in rapid and intense daytime heating. Conversely, rapid night time cooling is also the rule in high mountain locations. Thus stations located in the mountains have a greater daily temperature range than do stations at lower elevations.

- Clouds in the atmosphere help to moderate the Earth's temperature. Thus Clouds reduce the daily temperature range. Whether a given cloud will heat or cool the surface depends on several factors, including the cloud's altitude, its size, and the make-up of the particles that form the cloud.
- Low, thick clouds primarily reflect solar radiation and cool the surface of the Earth.

- High, thin clouds primarily transmit incoming solar radiation; at the same time, they trap some of the outgoing infrared radiation emitted by the Earth and radiate it back downward, thereby warming the surface of the Earth.

Q54. Consider the following statements:

1. Coriolis force causes the air to move to right in the northern hemisphere and left in the southern hemisphere.
2. Coriolis force affects wind speed.
3. Coriolis force acts at right angle to the wind.

Which of the statements given above is/are correct?

- A. 1 only
- B. 3 only
- C. 2 and 3 only
- D. 1 and 3 only

Answer: B

Exp: • Once air has been set in motion by the pressure gradient force (PGF), it undergoes an apparent deflection from its path, as seen by an observer on the earth. This apparent deflection is called the "Coriolis force" and is a result of the earth's rotation. Thus Coriolis force cannot cause the air to move. It only deflects a moving air. In the northern hemisphere, air is deflected to the right and in the southern hemisphere, air is deflected to the left by the Coriolis force.

- It also do not affect the wind speed. The amount of deflection the air makes is directly related to both the speed at which the air is moving and its latitude. Therefore, slowly blowing winds will be deflected only a small amount, while stronger winds will be deflected more. Likewise, winds blowing closer to the poles will be deflected more than winds at the same speed closer to the equator. The Coriolis force is zero right at the equator.
- Coriolis force acts at right angle to the wind.

Q55. Which of the following ocean currents is primarily driven under the influence of gravity?

- A. Counter Equatorial Current
- B. Deep Ocean Current
- C. Equatorial Current
- D. None of the above

Answer: A

Exp: • Counter Equatorial Current is phenomenon noted near the equator, an eastward flow of oceanic water in opposition to and flanked by the westward equatorial currents of the Atlantic, Pacific, and Indian oceans. To either side the trade winds blow constantly and push great volumes of water westward in the equatorial currents, raising the sea level in the west. The water piles on the western side of the ocean basins and from there the water flows downhill under the influence of gravity, creating narrow equatorial counter current. Lying primarily between latitude 3° and 10° N, the countercurrents shift south during the northern winter and north during the summer.

- Deep Ocean Currents (Global Conveyor Belt): This deep-water current is known as the global conveyor belt and is driven by density differences in the water. Water movements driven by differences in density are also known as thermohaline circulation because water density depends on its temperature (thermo) and salinity (haline).

Q56. Which of the following ocean currents passes through the Yucatan Channel into the Gulf of Mexico?

- A. Florida Current
- B. Antilles Current
- C. Caribbean Current
- D. Canary Current

Answer: C

Exp: None

Q57. Consider the following statements:

1. All meridians are identical in length.
2. On equinox, the earth's axis makes an angle of 90 degrees with the ecliptic plane.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: A

Exp: • Meridians are lines connecting north-to-south pole and all meridians are identical in length.

- The earth's axis makes an angle of 66.5 degrees with the ecliptic plane.

Q58. Which of the following is not in North Atlantic Ocean basin?

- A. Sargasso Sea
- B. Canary Current
- C. Azores
- D. Mauna Kea

Answer: D

Exp: • Canary current is a cold current which flows from north to south on eastern margin of North Atlantic Ocean basin.

- Azore is an archipelago composed of nine volcanic islands in the North Atlantic Ocean about 1,360 km (850 mi) west of continental Portugal.
- Mauna Kea is on Hawaiian island in the Pacific Ocean. It is the mountain with the total height more than that of Mount Everest. It measures 4206 m above sea level and 5426 m from sea level down to its base, for a total height of 9632 m.
- Sagasso sea refers to the central part of North Atlantic Ocean where there is a huge collection of sargassum sea weed because of stagnant surface waters.

Q59. Consider the following statements:

1. Large scale upwelling is most prominent on the eastern sides of ocean basins.
2. Upwelling occurs along the equator.
3. Somali current is a warm current and is formed during winter season.
4. Mid Oceanic Ridges have a role in the causation of ocean currents?

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: B

Exp: • Winds blowing across the ocean surface push water away. Water then rises up from beneath the surface to replace the water that was pushed away. This process is known as “upwelling.” Upwelling occurs in the open ocean and along coastlines. It is most prominent on the eastern sides of ocean basin like upwelling along Chili coastline of Eastern side of south Pacific ocean basin. Upwelling occurs along the equator. The reverse process, called “downwelling,” also occurs when wind causes surface water to build up along a coastline and the surface water eventually sinks toward the bottom. Water that rises to the surface as a result of upwelling is typically colder and is rich in nutrients. These nutrients “fertilize” surface waters, meaning that these surface waters often have high biological productivity. Therefore, good fishing grounds typically are found where upwelling is common

- Mid Oceanic Ridges and Seamounts have role in the modification of already existing ocean currents, they do not help in the generation of ocean currents.

Q60. Which of the following is the primary factor for the causation of Labrador and Oyashio currents?

- A. Polar easterlies
- B. Salinity difference
- C. Temperature difference
- D. Melt-water of snow and ice

Answer: D

Exp: Labrador and Oyashio currents are cold currents that flow on western margin of continent and from North Pole. The primary factor for the causation of these current is melting of snow & ice. Labrador Current brings along with it big icebergs, which increase the possibility of ship accidents. Due to its influence, north-eastern part of Canada remains frozen for most part of the year. Oyashio current brings cold water of Arctic Ocean into Pacific Ocean, where Oyashio Current meets Kuroshio Current. Merging with the Kuroshio Current it leads to heavy foggy condition.

Q61. Which of the following refers to the deposit of ice crystals formed by the freezing of super-cooled fog or cloud droplets on objects whose surface temperature is below freezing?

- A. Rime
- B. Hail
- C. Sleet
- D. Snow

Answer: A

Exp: • Rime: It is form of solid precipitation. It formed due to freezing of water droplets from fog onto cold surfaces; includes artificial snow; crystals tend to be larger than in snow.

- Hail: Hail is a form of solid precipitation. It consists of balls or irregular lumps of ice, each of which is referred to as a hail stone. Hail is associated with Cumulo-nimbus cloud and is the result of active turbulence/vertical currents. Hail forms in strong thunderstorm clouds, particularly those with intense updrafts, high liquid water content, great vertical extent, large water droplets, and where a good portion of the cloud layer is below freezing 0°C (32°F). These types of strong updrafts can also indicate the presence of a tornado. The growth rate is maximized where air is near a temperature of -13 °C (9 °F).

- Sleet: Sleet is rain or melted snow that freezes into ice pellets before hitting the ground. Sleet occurs during winter weather and is a type of winter precipitation. All precipitation falls out of a cloud as snow. In certain instances, in the winter, the snowflake will go through a warmer layer and begin to melt. As it continues to fall, it will then proceed through a colder layer and freeze

into an ice pellet or ball, very similar to hail. Unlike hail, the pellet only "falls" once and is generally very tiny in size.

- Snow: Snow is formed when temperatures are low and there is moisture in the atmosphere in the form of tiny ice crystals. When these tiny ice crystals collide they stick together in clouds to become snowflakes. If enough ice crystals stick together, they'll become heavy enough to fall to the ground.

Q62. Consider the following statements about urban areas:

1. Water vapour may condense onto pollutants even when the relative humidity is as low as 70 per cent.
2. Temperature inversion enhances pollution.
3. Precipitation is generally greater than in surrounding countryside.

Which of the statements given above is/are correct about urban areas?

- A. 2 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

Answer: D

Exp: • For the condensation of water vapour, there must be airborne particles which are known as condensation nuclei. Condensation nuclei are very small (about 0.2 - 10.0 microns) particles light enough to remain suspended in the air. Condensation nuclei are formed from a variety of sources including dust, pollen, smoke, salt from ocean spray and sulfates.

- There are two broad categories of condensation nuclei: hygroscopic and hydrophobic. Hygroscopic nuclei are "water seeking" nuclei. Water vapor condenses on hygroscopic surfaces readily even when the relative humidity is considerably lower than 70 percent i.e. even when the air is not yet saturated. Whereas Hydrophobic nuclei are water repelling and condensation start only at relative humidities greater than 100 percent, and even then with great difficulty. Examples of hydrophobic nuclei are oil, gasoline, and paraffin wax.

- Temperature inversion, a reversal of the normal behaviour of temperature in the troposphere, in which a layer of cool air at the surface is overlain by a layer of warmer air. (Under normal conditions air temperature usually decreases with height). Inversions play an important role in determining cloud forms, precipitation, and visibility. An inversion acts as a cap on the upward movement of air from the layers below. As a result, convection produced by the heating of air from below is limited to levels below the inversion. Diffusion of dust, smoke, and other air pollutants is likewise limited. Thus temperature inversion enhances pollution.

- Several factors in urban areas may lead to increase precipitation, for ex., the urban heat island creates thermally induced upward motions that act to increase the atmosphere's instability.

Q63. Which of the following represents specific humidity of air?

- A. Mass of water vapour in a unit mass of dry air.
- B. Mass of water vapour in a unit mass of air, including the water vapour.
- C. Ratio of the air's actual water vapour content compared with the amount of water vapour required for saturation at that temperature
- D. Mass of water vapour in a given volume of air.

Answer: B

Exp: a. Mixing Ratio: Mass of water vapour in a unit mass of dry air.

b. Specific humidity of air: (expressed as grams of water vapor per kilogram of air) Mass of water vapour in a unit mass of air, including the water vapour.

- c. Relative Humidity: (expressed as a percent) Ratio of the air's actual water vapour content compared with the amount of water vapour required for saturation at that temperature
- d. Absolute Humidity: (units are grams of water vapor per cubic meter volume of air) is a measure of the actual amount of water vapor in the air, regardless of the air's temperature.

Q64. Sustained life on Earth is a characteristic of

- A. Individual organism
- B. Community
- C. Ecosystem
- D. All of the above

Answer: D

Exp: We tend to associate life with individual organisms as they are alive. But sustaining life on earth requires more than individuals or even populations or species. Life is sustained by the interactions of many organisms functioning together, in ecosystems, interacting through their physical and chemical environments.

Q65. Which of the following can decrease biological diversity?

- 1. Symbiosis
- 2. Extreme environment
- 3. Recent introduction of exotic species
- 4. High diversity at one trophic level

Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: B

Exp: Symbiosis promotes biological diversity as it is a beneficial relationship between two organisms. Similarly, high diversity at one trophic level also increases biological diversity, for example- many kinds of trees provide habitats for many kinds of birds and insects.

Whereas, extreme environment (conditions near the limit of what living things can stand) and exotic species increase stresses for species. Therefore, both factors decrease biodiversity.

Q66. Conservation of endangered species requires conservation of its:

- A. Population
- B. Habitat
- C. Niche
- D. All of the above

Answer: D

Exp: Where a species live is its habitat and what it does for living is its ecological niche. Therefore, if we want to conserve a species in its native habitat, we must make sure that all the requirements of its niche must be present. Conservation of endangered species is more than a matter of putting many individuals of that species into an area, all the life requirements of that species must also be present. So, we have to conserve not only its population, but its habitat and its niche.

Q67. Which of the following statements is/are correct about Kigali Agreement?

- 1. It aims to phase down the use of hydrofluorocarbons (HFCs)

2. It is the first legally binding climate treaty of 21st century
 3. It was held at 27 th Meeting of Parties of the Montreal Protocol
 4. Under the agreement, the developed countries will start reducing the use of HFCs first.
- Select the correct answer using the code given below:

- A. 1 and 4 only
- B. 1, 2 and 4 only
- C. 1, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: B

Exp: Kigali Agreement was signed at 28th Meeting of Parties of the Montreal Protocol held at Kigali (Rwanda), held from October 8 to 15, 2016.

Kigali Agreement

- In Sept-2016, 197 countries have struck a new landmark deal at Kigali in Rwanda to reduce the emissions of category of greenhouse gases (GHGs) which leads to hydro fluorocarbons (HFCs).
- The Kigali Amendment amends the 1987 Montreal Protocol to now include gases responsible for global warming and will be binding on countries from 2019.
- It also has provisions for penalties for non-compliance. Under it, developed countries will also provide enhanced funding support estimated at billions of dollars globally.
- All signatory countries have been divided into three groups with different timelines to go about reductions of HFCs. This agreement shows a new form of grouping:
 - First group: It includes richest countries like US and those in European Union (EU). They will freeze production and consumption of HFCs by 2018. They will reduce them to about 15% of 2012 levels by 2036.
 - Second group: It includes countries like China, Brazil and all of Africa etc. They will freeze HFC use by 2024 and cut it to 20% of 2021 levels by 2045.
 - Third group: It includes countries India, Pakistan, Pakistan, Iran, Saudi Arabia etc. They will be freezing HFC use by 2028 and reducing it to about 15% of 2025 levels by 2047.

Q68. The special characteristics of plants and animals that enable them to be successful under prevailing set of environmental conditions are called as:

- A. Range of tolerance
- B. Ecological adaptations
- C. Hibernation
- D. Migration

Answer: B

Exp: Range of tolerance refers to the extreme limits of factors conducive/ promoting growth of biological species. 'Too little' of any factor may be a limiting factor, for example- too little of water in desert regions. Similarly, 'too much' may also limit the growth and distribution of an organism.

Whereas, the special characteristics of plants & animals that enable them to be successful under prevailing set of environmental conditions are called as their ecological adaptations.

Organism respond to changes in abiotic factors (temperature, salinity, light, soil etc.) in many ways like Regulation, Conformer, Migration, Suspension (hibernation).

Q69. Which of the following statements are correct?

1. United Nations Convention to Combat Desertification (UNCCD) is the only internationally legally binding framework to address desertification.

2. UNGA has declared 2010-2020 as United Nations Decade for Deserts
 3. Desertification refers to expansion and encroachment of deserts into marginal lands
 4. Desertification takes place due to natural reasons only
- Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 3 and 4 only

Answer: A

Exp: • UNCCD adopted in Paris, France on June 1994 and entered into force in December 1996. The Convention is to combat desertification and mitigate the effects of drought through national action programs that incorporate long-term strategies supported by international cooperation and partnership arrangements. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found. It is the first and only internationally legally binding framework set up to address the problem of desertification.

- Desertification is extreme form of land degradation in which once cultivable land is converted to non-cultivable waste land so desertification occurs not only due to expansion and encroachment of deserts into marginal lands.
- It most commonly occurs in arid, semi-arid and dry sub-humid regions, both due to natural factors and man-made causes (like land following, shifting cultivation, deforestation etc)

Q70. Which one of the following is the correct sequence of ecosystems in order of decreasing productivity?

- A. Oceans, lakes, grasslands, mangroves
- B. Mangroves, oceans, grasslands, lakes
- C. Mangroves, grasslands, lakes, oceans
- D. Oceans, mangroves, lakes, grasslands

Answer: C

Exp: Amongst all the aquatic ecosystems, oceans have almost minimum NPP. Moreover, mangroves are high productivity ecosystems, so in any case their NPP cannot be lesser than that of oceans, lakes etc. So, option A & D are ruled out. Again, in option B & C, oceans cannot have productivity higher than grasslands and lakes. That makes option B also ruled out. So, C is the answer.

Q71. Consider the following:

1. Access at affordable prices
2. Improved Energy Security and Independence
3. Greater sustainability
4. Economic growth

Which of the above are objectives of National Energy Policy 2017, drafted by Niti Aayog?

- A. 1 and 3 only
- B. 1, 2 and 3 only
- C. 2 and 3 only
- D. 1, 2, 3 and 4

Answer: D

Exp: All four are the objectives of National Energy Policy (NEP), 2017.

- NEP builds on the achievements of the earlier omnibus energy policy – the Integrated Energy Policy (IEP), and sets the new agenda consistent with the redefined role of emerging developments in the energy world. There is a need to support the trends which usher in efficiency by a pro-active policy.
- The new policy differs from the previous policy while including the issue related to sharp decline of crude oil prices, change in solar energy technology, heightened concern of climate change issues, ambitious target of Renewable energy and rural electrification agenda adopted by the Government.
- The four key objectives of the new energy policy are:
 1. access at affordable prices,
 2. improved energy security and independence,
 3. greater sustainability and
 4. economic growth.
- The National Energy Policy (NEP) aims to chart the way forward to meet the Government's recent bold announcements in the energy domain.
 1. All the Census villages are planned to be electrified by 2018, and universal electrification is to be achieved, with 24x7 electricity by 2022.
 2. The share of manufacturing in our GDP is to go up to 25% from the present level of 16%,
 3. Targeting reduction of oil imports by 10% from 2014-15 levels, both by 2022.
 4. NDCs target at
 1. reduction of emissions intensity by 33%-35% by 2030 over 2005,
 2. achieving a 175 GW renewable energy capacity by 2022, and
 3. share of non-fossil fuel based capacity in the electricity mix is aimed at above 40% by 2030

Q72. Consider the following statements with reference to crude oil:

1. Light and sweet crude oils give best yields of high value products like gasoline and LPG.
2. Sour crude oils have high proportion of sulphur.
3. Heavy crude oils give more of bitumen and asphalt.

Which of the statements given above is/are correct?

- A. 2 only
- B. 1 and 3 only
- C. 1, 2 and 3
- D. None of the above

Answer: C

Exp: • Depending on the mixture of hydrocarbon molecules, crude oil varies in color, composition and consistency. Different oil-producing areas yield significantly different varieties of crude oil. The words “light” and “heavy” describe a crude oil’s density and its resistance to flow (viscosity). Some, which are low in metals and sulfur content, light in color and consistency, and flow easily, are known as “light.” Less expensive, low-grade crude oils, which are higher in metals and sulfur content, and must be heated to become fluid, are known as “heavy.”

• The term “API Gravity” refers to the “American Petroleum Institute Gravity, which is a measure that compares how light or heavy a crude oil is in relation to water. If an oil’s “API Gravity” is greater than 10 then it is lighter than water and will float on it. If an oil’s “API Gravity” is less than 10, it is heavier than water and will sink.

• The term “sweet” is used to describe crude oil that is low in malodorous sulfur compounds such as hydrogen sulfide and mercaptans, and the term “sour” is used to describe crude oil containing high malodorous sulfur compounds.

- While light and sweet crude oils give best yields of high value products like gasoline and LPG, Heavy crude oils give more of bitumen and asphalt.
- West Texas Intermediate (WTI) is an extremely high quality crude oil which is greatly valued for the fact that it is of such premium quality, more and better gasoline can be refined from a single barrel than from most other types of oil available on the market.
- Brent Blend is a combination of different oils from 15 fields throughout the Scottish Brent and Ninian systems located in the North Sea.

Q73. Consider the following traditional systems of water storage and match them with the state where these occur:

Water Storage System	State
A. Zing	1. Uttarakhand
B. Naula	2. Maharashtra
C. Bandhara	3. Nagaland
D. Zabo	4. Jammu & Kashmir

- A. a:1 b:2 c:3 d:4
B. a:2 b:3 c:1 d:4
C. a:2 b:3 c:4 d:1
D. a:4 b:1 c:2 d:3

Answer: D

Exp: Zing- Practices in Ladakh. It is a channel that carries melt water of snow to agricultural fields.

Naula – It is a check dam built across spring in Uttarakhand.

Bandhara – It is a check dam across rivers in Maharashtra.

Zabo – It is a channel that carries rainwater to agricultural fields. When it carries water, it also passes through areas where cattle are kept. It is in Nagaland.

Q74. Consider the following statements:

1. West Bengal is the largest producer of rice in India.
2. "Tulapanji" rice and "Gobindbhog" rice of West Bengal have geographical indicator tag.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer: C

Exp: West Bengal is the largest 'rice' producing state in India with 50% of its arable land under rice cultivation.

Along with the above 2 commodities Banaganapalle mangoes of Andhra Pradesh was also given GI tag this year.

Complying with World Trade Organisation obligations, India enacted "The Geographical Indications of Goods (Registration & Protection) Act, 1999 (GI Act)" and has set up a registry in Chennai to register such names. GIs indicate goods as originating in a specific geographical region, the characteristics, qualities or reputation thereof essentially attributable to such region. GI-branded goods possess a recall value amongst consumers who essentially attribute these characteristics, qualities or reputation to such geographical origin.

Q75. Consider the following statements with reference to Coal Bed Methane (CBM):

1. It is not covered under Hydrocarbon Exploration and Licensing Policy (HELP).
2. Ministry of Coal has jurisdiction over Coal Bed Methane (CBM).

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: CBM is covered under HELP that includes all hydrocarbons like Natural Gas and Shale Gas, it is governed by Ministry of Petroleum and Natural Gas.

Coal bed methane (CBM):

- Methane is associated with coal as a byproduct of the coal formation process and it occurs naturally underground within coal reserves. It can be extracted using a variety of techniques.
- Currently, Great Eastern Energy Corporation and Essar Oil are the only two CBM-gas producing blocks in the country, both from separate reserves in Raniganj, West Bengal. Reliance Industries has reportedly begun test production from its two blocks in Madhya Pradesh.
- Comparison with Shale gas in extraction: CBM extraction gives out water while shale fracking needs water. Again, CBM production can only be ramped up gradually after de-watering while in case of shale, production is high in the initial years.

Hydrocarbon Exploration and Licensing Policy (HELP) has following key features:

- There will be a uniform licensing system which will cover all hydrocarbons, i.e. oil, gas, coal bed methane etc. under a single license and policy framework.
- Contracts will be based on “biddable revenue sharing”.
- An Open Acreage Licensing Policy will be implemented whereby a bidder may apply to the Government seeking exploration of any block not already covered by exploration.
- A concessional royalty regime will be implemented for deep water and ultra-deep water areas.
- The contractor will have freedom for pricing and marketing of gas produced in the domestic market on arms length basis.

Q76. Consider the following statements:

1. Conservation tillage is a method of cultivation that leaves the previous year's crop residue before and after planting next crop.
2. Strip tillage involves planting seeds in the valleys between carefully moulded ridges of the soil.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: A

Exp: Crop Residue Management (CRM): A year-round system beginning with the selection of crops that produce sufficient quantities of residue and may include the use of cover crops after low residue producing crops. CRM includes all field operations that affect residue amounts, orientation and distribution throughout the period requiring protection. Site-specific residue cover amounts needed are usually expressed in percentage but may also be in pounds. CRM is an “umbrella” term encompassing several tillage systems including conservation tillage, strip tillage, no-till, ridge-till, etc.

- Conservation tillage: Any tillage and planting system that leaves the previous year's crop residue before and after planting next crop to the soil surface to reduce soil erosion by water or wind.
- Strip tillage involves tilling soil in narrow strips where rest of the field is left untilled.
- Ridge tillage involves planting seeds in the valleys between carefully moulded ridges of the soil. The soil is left undisturbed from harvest to planting except for strips up to 1/3 of the row width. Planting is completed on the ridge and usually involves the removal of the top of the ridge.

Q77. In the context of Siang River, consider the following statements:

1. Siang is the principal constituent river of the Brahmaputra
2. Siang is also known as Dihang in parts of India
3. Siang River originates in Arunachal Pradesh

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

Answer: B

Exp: The crystal clear waters of the Siang river, considered the lifeline of Northern Arunachal Pradesh for centuries, has suddenly turned dark black triggering panic in the frontier state. The Siang is the principal constituent river of the Brahmaputra and flows 1,600km through southern Tibet as the Yarlung Tsangpo or Yarlung Zangbo before entering India. Siang is also known as Dihang in India, which joins the Lohit after flowing for 230 km. The Dibang joins at about 35 km downstream of Pasighat in East Siang district to form the Brahmaputra.

Q78. With which of the following clouds, the appearance referred to as "watery sun" (i.e. the sun/moon being dimly visible) is associated with?

- A. Altostratus
- B. Cirrostratus
- C. Cirrocumulus
- D. Altocumulus

Answer: A

Exp: It is a grey coloured, middle height cloud.

Q79. Consider the following statements with reference to Iron and Steel Industry:

1. Sponge Iron is produced from direct reduction of Iron ore to Iron by a reducing gas.
2. Reducing gas is a mixture of gases, primarily hydrogen (H₂) and Carbon Monoxide (CO).

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: Direct-reduced iron often referred to as sponge iron is produced from the direct reduction of iron ore by reducing gas. The term reduced iron comes from the chemical change that iron ore goes through when it is heated in a furnace at high temperatures in the occurrence of hydrogen-rich gasses. Direct-reduction is the processes which reduce iron oxides into metallic

iron to below the melting point. The product of this process is direct reduced iron. The reducing gas is a mixture of gasses, primarily hydrogen (H₂) and carbon monoxide (CO).

Q80. Consider the following statements:

1. The effect of Daylight Saving Time on daily life varies according to how far east or west the location is within a time zone.
2. When DST begins, clocks skip one hour.
3. DST begins in autumn season.

Which of the statements given above is/are correct?

- A. 1, 2 and 3
- B. 1 and 2 only
- C. 2 only
- D. 3 only

Answer: B

Exp: • A time zone represents a geographic area. All the clocks in a given time zone have the same time being shown. That same time is often called as STANDARD TIME. Many countries like USA & Russia have more than one time zone because these countries are so much big in terms of the width that having one common time zone will not work for them.

- Daylight Saving is a procedure in which the time in the clock is adjusted forward in spring & is readjusted backward in autumn.
- Locations farther east inside the time zone benefit more from DST than locations farther west in the same time zone.

Q81. In the context of the Treaty on the Prohibition of Nuclear Weapons, consider the following statements:

1. It is the first legally binding international agreement to comprehensively prohibit nuclear weapons.
2. It provides for limited stockpiles of the nuclear weapons only for the recognised nuclear weapons states joining the treaty.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: A

Exp: The Treaty on the Prohibition of Nuclear Weapons (TPNW), or the Nuclear Weapons Ban Treaty, is the first legally binding international agreement to comprehensively prohibit nuclear weapons, with the goal of leading towards their total elimination. In order to come into effect, signature and ratification by at least 50 countries is required. For those nations that are party to it, the treaty prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons, as well as assistance and encouragement to the prohibited activities. For nuclear armed states joining the treaty, it provides for a time-bound framework for negotiations leading to the verified and irreversible elimination of their nuclear weapons programme. Nuclear weapons – unlike chemical weapons, biological weapons, anti-personnel landmines and cluster munitions – are not prohibited in a comprehensive and universal manner. The Non-Proliferation Treaty (NPT) of 1968 contains only partial prohibitions, and nuclear-weapon-free zone treaties prohibit nuclear weapons only within certain geographical regions. It is the International Campaign to abolish Nuclear Weapons (ICAN)

which is a global civil society coalition that has been working to promote adherence to and full implementation of the TPNW. It was the campaign launched by ICAN in 2007 that helped to conclude TPNW for which ICAN was awarded the Nobel Peace Prize in 2017.

Q82. Which one of the following is the best description of 'CRISPR technology' that was in the news recently?

- A. It is a face-detecting technology used for payments, provide access to facilities, and track down criminals.
- B. It is a breakthrough technology used to control the self-driving cars and trucks.
- C. It is a new technology that makes spherical images and makes it possible to take 360-degree selfie.
- D. It is a genome editing technology to alter DNA sequences.

Answer: D

Exp: CRISPR technology is a simple yet powerful tool for editing genomes. It allows researchers to easily alter DNA sequences and modify gene function. Its many potential applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops. In popular usage, "CRISPR" (pronounced "crisper") is shorthand for "CRISPR-Cas9." CRISPRs are specialized stretches of DNA. The protein Cas9 (or "CRISPR-associated") is an enzyme that acts like a pair of molecular scissors, capable of cutting strands of DNA. CRISPR technology was adapted from the natural defense mechanisms of bacteria and archaea (the domain of single-celled microorganisms). These organisms use CRISPR-derived RNA and various Cas proteins, including Cas9, to foil attacks by viruses and other foreign bodies. They do so primarily by chopping up and destroying the DNA of a foreign invader. When these components are transferred into other, more complex, organisms, it allows for the manipulation of genes, or "editing."

Q83. In the context of the 'Moscow Declaration', consider the following statements:

- 1. It is the first Shanghai Cooperation Organisation's Ministerial Conference to counter global warming.
- 2. It was held to promote the conclusion of a comprehensive International Convention to counter terrorism.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: Health ministers, NGOs, and private sector representatives from 120 countries adopted the Moscow Declaration at the recently held first WHO Global Ministerial Conference on Ending Tuberculosis in the Sustainable Development Era. India is among the signatories to the declaration that WHO director-general Dr Tedros Ghebreyesus described in his address as a "milestone in the history of TB". The Moscow declaration emphasised the need for fixing multisectoral responsibility towards ending TB by 2035, the global target. It also said that multi-drug resistant TB would be tackled as a national public health crisis.

Q84. Consider the following statements on Accessible India Campaign:

- 1. Sugama Bharat Abhiyan is to help people with disabilities in line with the U.N Convention on Rights of People with Disabilities

2. Divyang Sarathi is an app launched for people with disabilities in India.

Which of the statements given above is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: Both the statements are correct. Accessible India Campaign or Sugamya Bharat Abhiyan is a program which is set to be launched to serve the differently-abled community of the country. The program aims to measure the design of disabled-friendly buildings and special and friendly policies at work place. The initiative also is in line with the Article 9 of UNCRPD- United Nations Convention on the Rights of Persons with Disabilities, to which India is a signatory.

Q85. With reference to the recently launched National Anti-Profiteering Authority, consider the following statements:

- 1. It is tasked to eliminate unfair practices by traders having adverse effect on competition and ensure fair competition.
- 2. It is constituted under the GST laws and is headed by the Finance Minister of India.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: The Union Cabinet in November 2017 had approved setting up of a five-member NAA, mandated to ensure that the benefits of GST rate reduction is passed on to consumers. The anti-profiteering framework under new indirect tax regime consists of NAA at top level, Standing Committee, Screening Committees in every state and Directorate General of Safeguards (DGS) in Central Board of Excise & Customs (CBEC). Finance Ministry has set up the National Anti-Profiteering Authority. Under the GST, profiteering would occur when the traders do not reduce the price of products even when the GST council reduces the tax rate, and instead enjoy the benefits of tax reduction as increased profits without passing on the benefit to the consumer.

Q86. A Singapore based marketing agency and Maharashtra based NGO have developed a Vermillion (Bindi) named Jeevan Bindi which contains:

- A. Iodine
- B. Potassium
- C. Sodium
- D. Zinc

Answer: A

Exp: None

Q87. With reference to 'Alliance for an Energy Efficient Economy (AEEE)', consider the following statements:

- 1. It is an alliance of G-20 member countries for achieving sustainable economic growth.
- 2. It is the only organisation in India which works on creating awareness about energy efficiency as a resource.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: B

Exp: Alliance for an Energy Efficient Economy (AEEE) is a policy advocacy and energy efficiency market enabler with a not-for-profit motive. It is the only organisation in India which works on creating awareness about energy efficiency as a resource. It advocates for data driven and evidence-based energy efficiency policies that will unleash innovation and entrepreneurship within the country to create an energy-efficient economy. Through incisive activities, AEEE mission is to be a partner in the transformation of India into a global leader in the field of energy efficiency, and shape India as one of the most attractive markets for companies with the best available energy-efficient technologies.

Q88. In the context of WTO, consider the following statements:

1. WTO members have commitments to reduce their trade-distorting domestic supports in the Amber Box.
2. In order to qualify for the Green Box a subsidy must not distort trade.
3. The Blue Box is an exemption from the general rule that all subsidies linked to production must be reduced or kept within defined minimal levels.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 3 only
- C. 1, 2 and 3
- D. None of the above

Answer: C

Exp: Recently India and China have raised objections over developed countries, including the US, the EU and Canada that have been consistently providing trade-distorting subsidies to their farmers at levels much higher than the ceiling applicable to developing countries. In WTO parlance, these subsidies are called as Aggregate Measurement of Support (AMS) or Amber Box support.

Q89. Recently, for the first time in our country, which of the following States has signed a Memorandum of Understanding with California-based Hyperloop Transportation Technologies (HTT) to develop India's first Hyperloop route in that state?

- A. Maharashtra
- B. Andhra Pradesh
- C. Haryana
- D. Karnataka

Answer: B

Exp: The government of Andhra Pradesh has signed a Memorandum of Understanding (MoU) with California-based Hyperloop Transportation Technologies (HTT) to develop India's first Hyperloop route in the state. The proposed route for the Hyperloop between the city centers of Vijaywada and Amaravati could potentially turn a trip of more than one hour into a 6 minute ride. Hyperloop transportation system is a transportation system where a pod-like vehicle is propelled through a near-vacuum tube connecting cities at speeds matching that of an aircraft.

Q90. With reference to 'the 'Zero Hunger Programme', consider the following statements:

1. The programme works to make India free from malnutrition by 2022 and attaining Zero Hunger.
2. The programme has been launched by the Ministry of Women and Child Development and the Ministry of Agriculture & Farmers Welfare.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: A

Exp: The 'Zero Hunger Programme works in addition to government's other plans to make India free from malnutrition by 2022 and attaining 'Zero Hunger' (SDG-2). The programme is initiated by Indian Council of Agricultural Research in alliance with Indian Council of Medical Research (ICMR), M. S. Swaminathan Research Foundation and the Biotechnology Industry Research Council (BIRAC). The programme will also involve the concerned state governments. The Zero Hunger Programme includes many farming organisations that will be focusing on nutrition, setting up genetic gardens for bio-fortified plants and initiation of 'Zero Hunger' training. The genetic garden will help grow bio-fortified plants containing germplasm of naturally bio-fortified crops through plant breeding with extra nutritional values. These crops and plants will be vital for India to supplement micro-nutrient deficiencies, including iron, zinc, vitamin A and iodine among many others. 16th October is observed globally as World Food Day.

Q91. Consider the following Reports:

1. World Development Report
2. Ease of Doing Business Report
3. Global Financial Development Report
4. Global Financial Stability Report
5. Global Competitiveness Report

Which of the above Reports are published by the World Bank?

- A. 1, 2 and 3 only
- B. 1, 3, 4 and 5 only
- C. 2, 4 and 5 only
- D. 1, 2, 3, 4 and 5

Answer: A

Exp: Recently India has been ranked as the 40th most competitive economy – slipping one place from last year's ranking – on the World Economic Forum's global competitiveness index. Global Competitiveness Report (GCR) is published by the World Economic Forum whereas Global Financial stability report is published by IMF.

Q92. In order to protect the rich aquatic biodiversity of river Ganga recently a Turtle Sanctuary has been approved by the government under the Namami Gange programme in which one of the following States?

- A. Uttarakhand
- B. Uttar Pradesh
- C. Bihar
- D. West Bengal

Answer: B

Exp: In order to protect the rich aquatic biodiversity of river Ganga from escalating anthropogenic pressures, development of a Turtle sanctuary in Allahabad along with a River Biodiversity Park at Sangam have been approved under Namami Gange programme. Rivers Ganga and Yamuna at Allahabad are home to some of the most endangered fauna like turtles, the National Aquatic Animal – Gangetic dolphin, the Gharial and numerous migratory and resident birds. The sustenance of more than 2000 aquatic species including threatened gharials, dolphins and turtles in river Ganga exemplifies the rich biodiversity of this lifeline to over 40% of the country's population.

Q93. Recently which one of the following cities has been accorded the status of India's first World Heritage City by UNESCO?

- A. Jaipur
- B. Kolkata
- C. Ahmedabad
- D. Varanasi

Answer: C

Exp: The commercial capital of Gujarat, Ahmedabad, has been formally accorded the status of India's first World Heritage City by UNESCO. The honour makes the walled city of Ahmadabad the first city in India, and the third in Asia, to be on the list. The other two cities are- Bhaktpur in Nepal and Galle in Sri Lanka. India is second after China in terms of number of world heritage properties in ASPAC (Asia and Pacific) region, and overall seventh in the world. India now has a total of 36 World Heritage Inscriptions — 28 cultural, 7 natural and 1 mixed site.

Q94. Recently, India proposed to set up its first 'Mega Coastal Economic Zone (CEZ)' in which of the following States?

- A. Gujarat
- B. Andhra Pradesh
- C. Maharashtra
- D. Tamil Nadu

Answer: C

Exp: The Government has given the go-ahead for setting up India's first mega coastal economic zone (CEZ) at the Jawaharlal Nehru Port in Maharashtra as part of a plan to develop 14 such industrial clusters to spur manufacturing and generate jobs. The Union Cabinet had last year approved setting up of 14 mega CEZs under the National Perspective Plan of the Sagarmala Programme, with an aim to promote development of industrial clusters around ports, encourage port led development, reduce logistics cost and time for movement of cargo, enhance global competitiveness of India's manufacturing sector and create hubs of job creation.

Q95. 'IndiaRAP programme' an initiative launched by the Government of India, stands for which of the following?

- A. Road Assessment Programme to evaluate highways' safety levels, and seek to eliminate the most unsafe roads.
- B. Rapid Ambulance Programme to promote access to emergency health
- C. Rural Access Programme, an e-Governance initiative programme by the GOI.
- D. Resourceful Adolescent Programme to provide sex education to school children.

Answer: A

Exp: India Road Assessment Programme (IndiaRAP) was unveiled by Global Charity to rate highways' safety levels and to eliminate the most unsafe roads. It aims to make Indian roads safer and curb fatalities.

Q96. Consider the following statements regarding the Domestic- Systematically Important Banks (DSIBs):

1. Banks whose assets cross 1% of the GDP are considered DSIBs.
2. The Systematically Important Banks domestically are identified by Central Govt of a country and globally by World Bank.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: • Banks whose assets cross 2% of the GDP are considered DSIBs.

• The Systematically Important Banks domestically are identified by Central Banks of a country and globally by BASEL committee on banking supervision.

Q97. Consider the following war exercises conducted by India:

Name of Exercise	Participating country
1. Yudh Abhyas	USA
2. Nomadic Elephant	Mongolia
3. Surya Kiran	Bangladesh
4. Sampriti	Nepal

Which of the above is correctly matched?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 and 4 only
- D. None of the above

Answer: A

Exp: Name of Exercise Participating country

Yudh Abhyas USA

Nomadic Elephant Mongolia

Surya Kiran Nepal

Sampriti Bangladesh

Q98. Consider the following statements regarding Pt. Deen Dayal Upadhyay Vigyan Gram Sankul Pariyojana:

1. The Scheme has been launched by Ministry of Science & Technology.
2. The Scheme has been started in Uttarakhand.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: None

Q99. The Ministry of Health and Family Welfare has launched two new contraceptives – Antara & Chhaya, to meet the emerging needs of couples. Consider the following statements in this regard:

1. 'Chhaya' is an injection of Medroxyprogesterone acetate (MPA), a birth control hormone and it will be effective for 3 months.
2. Antara is a non-steroidal, non-hormonal oral contraceptive pill which will be effective for 1 week.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

Exp: • Antara is an injection of Medroxyprogesterone acetate (MPA), a birth control hormone and it will be effective for 3 months.

• 'Chhaya' is a non-steroidal, non-hormonal oral contraceptive pill which will be effective for 1 week.

Q100. Consider the following statements regarding the Public Finance Management System (PFMS):

1. It is a web-based software application developed and implemented by the Office of Controller General of Accounts (CGA).
2. Its coverage includes Central Sector and Centrally Sponsored Schemes as well as other expenditures including the Finance Commission Grants.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Exp: None

