

ANSWERS TO THE GS QUESTION PAPER -1 HELD ON 2nd JUNE 2019

HISTORY

1. With reference to Mughal India, what is/are the difference/differences between Jagirdar and Zamindar?

1. Jagirdars were holders of land assignments in lieu of judicial and police duties, whereas Zamindars were holders of revenue rights without obligation to perform any duty other than revenue collection.
2. Land assignments to Jagirdars were hereditary and revenue rights of Zamindars were not hereditary.

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

During Akbar's period all the territory was broadly divided into two: khalisa and jagir. The revenue from the first went to Imperial treasury and that from jagir was assigned to jagirdars in lieu of their salary in cash (naqd) according to their rank. Right to collect revenue was to utilise the same for their salary and to meet their military obligations. The judicial and police functions were performed locally by zamindars. An important feature of the jagir system was shifting of jagir-holders from one jagir to another for administrative reasons. This system of transfers checked the jagirdars from developing local roots. Thus jagirs were transferable and could be seized too. Zamindars on the other hand were hereditary. The zamindars were present in practically every part of the Mughal Empire and held the most significant position in the agrarian structure of Mughal India. The word zamindar is derived from two Persian words-zamin (land) and dar (holder).

Source: Medieval India, Class 11 NCERT, by Satish Chandra

2. With reference to land reforms in independent India, which one of the following statements is correct?

- (a) The ceiling laws were aimed at family holdings and not individual holdings.

- (b) The major aim of land reforms was providing agricultural land to all the landless.
- (c) It resulted in cultivation of cash crops as a predominant form of cultivation.
- (d) Land reforms permitted no exemptions to the ceiling limits.

Answer: B

Major weakness of Land ceiling laws was that they were aimed at individual holdings. It allowed many zamindars to transfer land notionally to their relatives and thus escape the ceiling. The reason for land reforms was providing land to all landless people (redistribution) because landlessness was considered as one major reason of poverty and exploitation. Cultivation of cash crops require much more inputs than mere availability of holdings. Cash crops, during British time, were induced by force while in post-independence, major transformation for cash crops has happened where capital, market access, technology and irrigation are available. After the Second Plan, a large numbers of exemptions kicked in for certain categories of land – tea/rubber plantations, orchards, dairying etc to promote certain kind of capitalist expansion in place of absentee landlordism.

Source – India since Independence, Chapter 28 and 29, Bipin Chandra

3. Consider the following statements about 'the Charter Act of 1813':

1. It ended the trade monopoly of the East India Company in India except for trade in tea and trade with China.
2. It asserted the sovereignty of the British Crown over the Indian territories held by the Company.
3. The revenues of India were now controlled by the British Parliament.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: A

The 1813 Act ended the Company's monopoly over trade in India but the company retained

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trade with China and the trade in tea. So, statement 1 is correct. (Spectrum 2017, 566).

The Act asserted the “undoubted sovereignty of the Crown of the United Kingdom” over Indian territories. So, statement 2 is correct (Plassey to Partition 2012, 79).

The revenues of India were controlled by the British parliament through Pitts India Act 1784.

Source – Plassey to Partition by Sekhar Bandyopadhyay and Spectrum History

4. With reference to Swadeshi Movement, consider the following statements:

1. It contributed to the revival of the indigenous artisan crafts and industries.
2. The National Council of Education was established as a part of Swadeshi Movement.

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

The Swadeshi spirit found expression in the establishment of swadeshi textile mills, soap and match factories, tanneries, banks etc. so it contributed to the revival of the indigenous artisan crafts and industries. So, statement 1 is correct.

On August 15, 1906, the National Council of Education was set-up to organise a system of education.

Source – Spectrum History 2017, 296-297

5. Consider the following pairs:

	Movement/ Organization		Leader
1.	All India Anti-Untouchability League	:	Mahatma Gandhi
2.	All India Kisan Sabha	:	Swami Sahajanand Saraswati
3.	Self-Respect Movement	:	E. Ramaswami Naicker

Which of the pairs given above is/are correctly matched?

- (a) 1 only
- (b) 1 and 2 only

- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer: D

Gandhi set up All India Anti-Untouchability League in September 1932. (Spectrum Page 438).

The All India Kisan Sabha was founded in Lucknow in April 1936 With Swami Sahjananda Saraswati as the president. (Spectrum Page 652).

Self-Respect Movement emerged in South India under the leadership of E Ramaswamy Naicker, “Periyar” (Plassey to Partition 349).

Source – Spectrum and Plassey to Partition

6. Which one of the following is not a Harappan site?

- (a) Chanhudaro
- (b) Kot Diji
- (c) Sohgaura
- (d) Desalpur

Answer: C

Chanhudaro and Desalpur are Harappan sites. Kot Diji is contemporaneous to Harappan era. Sohgaura, on the other hand, is famous for Ashokan era inscription.

Source: Ancient India NCERT, RS Sharma (Chapters – Harappan Civilisation, The Age of Mauryan)

7. In which of the following relief sculpture inscriptions is 'Ranyo Ashoka' (King Ashoka) mentioned along with the stone portrait of Ashoka?

- (a) Kanganahalli
- (b) Sanchi
- (c) Shahbazgarhi
- (d) Sohgaura

Answer: A

Kanaganahalli is about 3 km from Sannati, Karnataka. An important excavation site for Buddhist monuments. The most important finding of the excavation include a stone sculptured slab bearing the name Ranyo Ashoko. The first inscribed portrait of Ashoka (surrounded by female attendants and queens) found at Kanaganahalli

Source: A History of Ancient and Early Medieval India, Upinder Singh

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8. Consider the following:
1. Deification of the Buddha
 2. Treading the path of Bodhisattvas
 3. Image worship and rituals
- Which of the above is/are the feature/features of Mahayana Buddhism?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

Answer: D

Mahayana Buddhism is one of two main existing branches of Buddhism (the other being Theravada). It started considering Buddha as a god rather than a great teacher and began worshipping Buddha's images. It also has a whole cosmology of gods and goddesses as well as various Bodhisattvas seeking complete enlightenment for the benefit of all sentient beings. In fact, the teachings of Mahayana are also nothing but treating the path of various Bodhisattvas.

Source – A History of Ancient and Early Medieval India, Upinder Singh. Chapter 8 – Interactions and Innovations (200BCE-200CE)

9. With reference to forced labour (Vishti) in India during the Gupta period, which one of the following statements is correct?
- (a) It was considered a source of income for the State, a sort of tax paid by the people.
 - (b) It was totally absent in the Madhya Pradesh and Kathiawar regions of the Gupta Empire.
 - (c) The forced labourer was entitled to weekly wages.
 - (d) The eldest son of the labourer was sent as the forced labourer.

Answer: A

Vishti was form of forced labour extracted by either state, provincial governor or local chief. It is also mentioned on Gupta era copper inscriptions that enlist variety of taxes. Junagarh inscription mentions vishti as one form of tax, which indicates that it was extracted from Gujarat and Malwa region. Since it was a forced labour in lieu of tax, it was not a wage labour. Wage labour existed in ancient India but it was not called vishti. Vishti could be extracted

from anyone, not in particular from eldest son only.

Source: A History of Ancient and Medieval India, Upinder Singh.

10. Building 'Kalyana Mandapas' was a notable feature in the temple construction in the kingdom of
- (a) Chalukya
 - (b) Chandela
 - (c) Rashtrakuta
 - (d) Vijayanagara

Answer: D

Kalyana Mandapas meant to celebrate divine weddings was a notable feature of the Vijayanagara Kingdom.

Source – Themes in Indian History II, Page 186

11. Consider the following statements:
1. In the revenue administration of Delhi Sultanate, the in-charge of revenue collection was known as 'Amil'.
 2. The Iqta system of Sultans of Delhi was an ancient indigenous institution.
 3. The office of 'Mir Bakshi' came into existence during the reign of Khalji Sultans of Delhi.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 3 only
 - (d) 1, 2 and 3

Answer: A

Amils were officers deputed to collect revenue during the sultanate era in North India. Mir Bakshi, on the other hand, was a Mughal high office in charge of military pay and accounts. Iqta system of land control was introduced in India by the Delhi sultans. It was originally of Central Asian and West Asian origin.

Source: Medieval India, NCERT Satish Chandra

12. Consider the following statements:
1. Saint Nimbarka was a contemporary of Akbar.
 2. Saint Kabir was greatly influenced by Shaikh Ahmad Sirhindi.

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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

Both the statements are incorrect. Nimbarka era is not exactly known but its sometime in 12th-13th century. Kabir belonged to the earlier era than Sirhindi. Also, Sirhindi was Islamic, Hanafi, scholar of Naqshbandi silsilah while Kabir was the follower of Nirgun bhakti.

Source: Medieval India NCERT by Satish Chandra

13. Which one of the following groups of plants was domesticated in the 'New World' and introduced into the 'Old World'?

- (a) Tobacco, cocoa and rubber
- (b) Tobacco, cotton and rubber
- (c) Cotton, coffee and sugarcane
- (d) Rubber, coffee and wheat

Answer: A

Cotton was cultivate in India since ancient era. Even Harappan era evidence of cotton cultivation is found. So is wheat. Wheat has been a widely cultivated crop in India since time immemorial. However tobacco, cocoa and rubber came to India through Europeans in the late medieval or early modern era. All of them originated in South America. This process is termed as Columbian exchange (named for Christopher Columbus). It was the widespread transfer of plants, animals, culture, human populations, technology, diseases, and ideas between the Americas, West Africa, and the Old World in the 15th and 16th centuries.

14. With reference to the British colonial rule in India, consider the following statements:

1. Mahatma Gandhi was instrumental in the abolition of the system of 'indentured labour'.
2. In Lord Chelmsford's 'War Conference', Mahatma Gandhi did not support the resolution on recruiting Indians for World War.
3. Consequent upon the breaking of salt law by Indian people, the Indian

National Congress was declared illegal by the colonial rulers.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer: B

Statement 1 and 3 are correct. Indentured labour system soon died after Gandhi left South Africa. Also, Gandhi's colleague C.f. Andrews contributed in the abolition campaign.

Statement 2 is incorrect. Gandhi did support the resolution on recruiting Indians for World War.

Source: Spectrum Modern India

15. With reference to Indian National Movement, consider the following pairs:

Person	Position held
Tej Bahadur Saprú	President, All India Liberal Federation
K. C. Neogy	Member, The Constituent Assembly
P. C. Joshi	General Secretary, Communist Party of India

Which of the pairs given above is/are correctly matched?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: D

Tej Bahadur Saprú was a prominent Indian freedom fighter, lawyer and politician. He was a key figure in India's struggle for independence, helping draft the Indian Constitution. He was the leader of the Liberal party in British-ruled India. When the Montagu report of 1918 was made public, there was a divide in the Congress over it. The moderates welcomed it while the extremists opposed it. This led to a schism in the Congress with moderate leaders forming the "Indian National Liberal Federation" in 1919. The party (INLF) was founded by Surendra Nath Banarjea and some of its prominent leaders were Tej Bahadur Saprú, V. S. Srinivasa Sastri and M.

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R. Jayakar. Tej Bahadur Sapru emerged as the most important leader among the Liberals.

KC Neogy, was a politician from West Bengal. He was a member of the Constituent Assembly of India, member of the first Cabinet of independent India and the chairman of the first Finance Commission of India.

PC Joshi was one of the early leaders of the communist movement in India. He was the first general secretary of the Communist Party of India from 1935–47.

Source: Modern India Spectrum

16. With reference to Mian Tansen, which one of the following statements is not correct?

- (a) Tansen was the title given to him by Emperor Akbar.
- (b) Tansen composed Dhrupads on Hindu gods and goddesses.
- (c) Tansen composed songs on his patrons.
- (d) Tansen invented many Ragas.

Answer: A

Tansen was the title given to him by Raja Vikramjit of Gwalior. Tansen was a court musician in the darbar of Raja Ramachandra of Bandavagarh (Rewa).

Source:

<https://www.thehindu.com/entertainment/music/the-legend-of-mian-tansen/article22893454.ece>

17. Who among of the following Mughal Emperors shifted emphasis from illustrated manuscripts to album and individual portrait?

- (a) Humayun
- (b) Akbar
- (c) Jahangir
- (d) Shah Jahan

Answer: C

18. Consider the following pairs:

	Famous place	River
1.	Pandharpur	Chandrabhaga
2.	Tiruchirappalli	Cauvery
3.	Hampi	Malaprabha

Which of the pairs given above are correctly matched?

- (a) 1 and 2 only
- (b) 2 and 3 only

- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: A

1. Located on the bank of the Tungabhadra River, Hampi was the Vijaynagar Capital. It is famous for many temples like Virupaksha Temple, Vithala Temple and Nandi Statue.
2. Pandharpur is a well-known pilgrimage town on the banks of Chandrabhaga River in Maharashtra
3. Tiruchirappalli is situated on the banks of the river. It was a citadel of the early Cholas which later fell to the Pallavas.

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GEOGRAPHY - CONCEPTS, WORLD, INDIA AND ENVIRONMENT

- On 21st June, the Sun
 - does not set below the horizon at the Arctic Circle
 - does not set below the horizon at Antarctic Circle
 - shines vertically overhead at noon on the Equator
 - shines vertically overhead at the Tropic of Capricorn

Answer: A

Explanation: The equator is the circle where the Sun is directly overhead at noon on the equinoxes.

The Arctic and Antarctic Circles are located at ± 66.5 degrees latitude. Note that $66.5 + 23.5$ equals 90 degrees. This means that on December 21, when the Sun is directly over the Tropic of Capricorn at noon, it will not be visible from the Arctic Circle. So above the Arctic Circle, there is a period during the winter when the sun remains below the horizon. The same is true of the Antarctic Circle during Southern Hemisphere winter. On June 21st, when the sun is directly over the Tropic of Cancer at noon, it is not visible from below the Antarctic Circle.

- Which one of the following National Parks lies completely in the temperate alpine zone?
 - Manas National Park
 - Namdapha National Park
 - Neora Valley National Park
 - Valley of Flowers National Park

Answer: D

The Alpine forests are found all along the Himalaya at altitude ranging between 2500m to 3500m.

Valley of Flowers National Park - At 3352 to 3658 meters above sea level

Namdapha National Park has a very wide altitudinal variation – from 200m to 4,500m in the snow-capped mountain. Thus, it doesn't lie 'completely' in the temperate alpine zone.

- Consider the following statements:

- Asiatic lion is naturally found in India only.
- Double-humped camel is naturally found in India only.
- One-homed rhinoceros is naturally found in India only.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- 1 and 3 only
- 1, 2 and 3

Answer: A

Nearly all wild lions live in sub-Saharan Africa, but one small population of Asiatic lions exists in India's Gir Forest. Asiatic lions and African lions are subspecies of the same species. Hence, Statement 1 is correct.

The greater one-horned rhino lives in northern India and southern Nepal, in riverine (floodplain) grasslands and adjacent woodland. Hence, Statement 3 is not correct.

The Bactrian camel is a large, even-toed ungulate native to the steppes of Central Asia. The Bactrian camel has two humps on its back, in contrast to the single-humped dromedary camel. Its population of two million exists mainly in the domesticated form. A small number of feral Bactrian camels still roam in Kazakhstan and the Nubra Valley in India. Hence, Statement 2 is not correct.

- In the context of which of the following do some scientists suggest the use of cirrus cloud thinning technique and the injection of sulphate aerosol into stratosphere?
 - Creating the artificial rains in some regions
 - Reducing the frequency and intensity of tropical cyclones
 - Reducing the adverse effects of solar wind on the Earth
 - Reducing the global warming

Answer: D

Thinning cirrus clouds would be achieved by injecting ice nuclei (such as dust) into regions where cirrus clouds form, making the ice crystals bigger and reducing the cirrus optical depth. Thinning the clouds could allow more heat to escape into space and thereby cool the planet.

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Stratospheric sulfate aerosol injection has been proposed to counteract anthropogenic greenhouse gas warming and prevent regional climate emergencies. It increases reflectivity of lower stratosphere to cast a small proportion of the inbound sunlight back into space and cool the planet off.

5. In the context of which one of the following are the terms 'pyrolysis and plasma gasification' mentioned?
- (a) Extraction of rare earth elements
 - (b) Natural gas extraction technologies
 - (c) Hydrogen fuel-based automobiles
 - (d) Waste-to-energy technologies

Answer: D

Like incineration; pyrolysis, gasification and plasma technologies are thermal processes that use high temperatures to break down waste. These technologies are sometimes are known as Advanced Thermal Technologies or Alternative Conversion Technologies. They typically rely on carbon-based waste such as paper, petroleum-based wastes like plastics, and organic materials such as food scraps.

6. Which of the following are in Agasthyamala Biosphere Reserve?
- (a) Neyyar, Peppara and Shendurney Wildlife sanctuaries; and Kalakad Mundanthurai Tiger Reserve
 - (b) Mudumalai, Sathyamangalam and Wayanad Wildlife Sanctuaries; and Silent Valley National Park
 - (c) Kaundinya, Gundla Brahmeswaram and Papikonda Wildlife Sanctuaries; and Mukurthi National Park
 - (d) Kawal and Sri Venkateswara Wildlife Sanctuaries; and Nagarjunasagar-Srisaillam Tiger Reserve

Answer: A

Agasthyamala Biosphere Reserve is a unique genetic reservoir of cultivated plants, in particular cardamom, jamune, nutmeg, pepper and plantain. Three wildlife sanctuaries, Shendurney, Peppara and Neyyar, are located in the site, as well as the Kalakad Mundanthurai Tiger reserve.

7. Consider the following statements:
1. Some species of turtles are herbivores.

2. Some species of fish are herbivores.
3. Some species of marine mammals are herbivores.
4. Some species of snakes are viviparous.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 2, 3 and 4 only
- (c) 2 and 4 only
- (d) 1, 2, 3 and 4

Answer: D

1. Adult sea turtles are referred to as herbivores although as hatchlings they are omnivores. Their diet consists primarily of algae, seagrasses, and seaweed.
2. Herbivorous fishes are fishes that eat plant material. Surgeonfish and parrotfish are two familiar examples, often seen browsing and scraping on reef algae.
3. Invertebrates, animals without backbones, make up 97 percent of all species alive today, or 25 of the 26 phyla into which the animal kingdom is divided. The majority are carnivores and omnivores, but a relatively small number are herbivores, such as some sea snails -- the black-footed paua, top shell snails, limpets, turban shells, abalones and conch -- sea hares and sea cucumbers who graze on algae, seaweed and other plants.
4. While the majority of snakes lay their eggs in a nest, some of them actually retain the eggs inside of their bodies until they're ready to hatch. Snakes that lay their eggs outside of their bodies are known as oviparous. Those that retain them are called ovoviviparous. Ovoviviparous snakes appear to give birth to live young, but they actually don't -- although there are those who do, known as viviparous snakes.

8. Consider the following pairs:

Wildlife	Naturally found in
Blue-finned Mahseer	: Cauvery River
Irrawaddy Dolphin	: Chambal River
Rusty-spotted Cat	: Eastern Ghats

Which of the pairs given above are correctly matched?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only

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(d) 1, 2 and 3

Answer: C

Irrawaddy dolphins are quite shy, and all that can be seen of them most of the time is a dorsal fin or a tail fluke. The species gets its common name from the Irrawaddy River in Myanmar, where it also lives, it was first described in 1866 from a specimen found in the Vishakapatnam harbour in present day Andhra Pradesh on India's east coast. In Chilika they can be seen singly, in pairs or as small groups of 4-6 individuals. Thus, it is not observed in Chambal river.

9. Why is there a great concern about the 'microbeads' that are released into environment?
- The are considered harmful to marine ecosystems.
 - They are considered to cause skin cancer in children.
 - They are small enough to be absorbed by crop plants in irrigated fields.
 - They are often found to be used as food adulterants.

Answer: A

Microbeads are small, solid, manufactured plastic particles that are less than 5mm and don't degrade or dissolve in water. They may be added to a range of products, including rinse-off cosmetics, personal care and cleaning products. Microbeads are used as ingredients in these products for a variety of purposes. This includes as an abrasive or exfoliant, a bulking agent, for controlled timed release of active ingredients, and to prolong shelf life. They are also a relatively cheap ingredient.

Microbeads are not captured by most wastewater treatment systems. If they are washed down drains after use, they can end up in rivers, lakes and oceans. Once in the water, microbeads can have a damaging effect on marine life, the environment and human health. This is due to their composition, ability to adsorb toxins and potential to transfer up the marine food chain. These tiny plastics persist in the environment as they are almost impossible to remove. The best way to reduce their impact is to prevent them from entering the environment.

10. Recently, there was a growing awareness in our country about the importance of Himalayan nettle (*Girardinia diversifolia*) because it is found to be a sustainable source of

- anti-malarial drug
- biodiesel
- pulp for paper industry
- textile fibre

Answer: D

In many parts of the world, natural resources are the only source of livelihood opportunities available to people. Recently, *Girardinia diversifolia* (Himalayan nettle), a fibre-yielding plant, has become an important livelihood option for people living in the remote mountainous villages of the Hindu Kush Himalaya. There is a community in Khar, a hamlet in Darchula district in far-western Nepal, which produces fabrics from Himalayan nettle. The fabric and the things made from it are sold in local as well as national and international markets as high-end products.

11. For the measurement/estimation of which of the following are satellite images/remote sensing data used?

- Chlorophyll content in the vegetation of a specific location
- Greenhouse gas emissions from rice paddies of a specific location
- Land surface temperatures of a specific location

Select the correct answer using the code given below.

- 1 only
- 2 and 3 only
- 3 only
- 1, 2 and 3

Answer: D

The visible/near infrared reflectance properties of leaves from several *Eucalyptus* species were studied to determine appropriate indices for remote sensing of chlorophyll content.

Remote sensing is used in measuring greenhouse gas emissions from rice paddies and land surface temperature also at some specific locations. Indian scientists study high resolution maps generated by satellite imagery of cloud-prone rice paddy cultivation regions.

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12. Consider the following States:

1. Chhattisgarh
2. Madhya Pradesh
3. Maharashtra
4. Odisha

With reference to the States mentioned above, in terms of percentage of forest cover to the total area of State, which one of the following is the correct ascending order?

- (a) 2-3-1-4
- (b) 2-3-4-1
- (c) 3-2-4-1
- (d) 3-2-1-4

Answer: C

Maharastra -- 16.74 %
 Madhya Pradesh – 25.11 %
 Odisha-- 32.98 %
 Chhattisgarh – 41.09 %

13. Which of the following statements are correct about the deposits of 'methane hydrate'?

1. Global warming might trigger the release of methane gas from these deposits.
2. Large deposits of 'methane hydrate' are found in Arctic Tundra and under the seafloor.
3. Methane in atmosphere oxidizes to carbon dioxide after a decade or two.

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

Methane hydrates can only form under very specific physical, chemical and geological conditions. High water pressures and low temperatures provide the best conditions. Methane Hydrate deposits may be several hundred meters thick and generally occur in two types of settings: under Arctic permafrost, and beneath the ocean floor. Global Warming led to the increase in the temperature which consequently destabilize the methane hydrates and thus release of methane. Methane is relatively short-lived in the atmosphere; a molecule of methane is oxidized to water and carbon dioxide within a decade or

so, mainly by reaction with another trace gas, the hydroxyl radical OH-.

14. Consider the following:

1. Carbon monoxide
2. Methane
3. Ozone
4. Sulphur dioxide

Which of the above are released into atmosphere due to the burning of crop/biomass residue?

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

Answer: D

Burning biomass emits large amounts of pollutants, just like burning other solid fuels such as coal. Burning organic material emits particulate matter (PM), nitrogen oxides (NOx), carbon monoxide (CO), sulphur dioxide (SO₂), lead, mercury, and other hazardous air pollutants (HAPs).

Source:

http://www.isca.in/EARTH_SCI/Archive/v1/i1/4.ISCA-IRJES-2013-005.pdf

15. Consider the following pairs:

	Sea	Bordering Country
1	Adriatic Sea	Albania
2	Black Sea	Croatia
3	Caspian Sea	Kazakhstan
4	Mediterranean Sea	Morocco
5	Red Sea	Syria

Which of the pairs given above are correctly matched?

- (a) 1, 2 and 4 only
- (b) 1, 3 and 4 only
- (c) 2 and 5 only
- (d) 1, 2, 3, 4 and 5

Answer: B

16. Among the following, which one is the largest exporter of rice in the world in the last five years?

- (a) China
- (b) India
- (c) Myanmar
- (d) Vietnam

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Answer: B

India became the largest rice exporter in 2015 and maintained the position since then in the specific years of 2016-17 and 2017-18. Hence, average is taken down on India as the largest exporter of rice in last 5 years.

17. Consider the following pairs:

Glacier	River
Bandarpunch	Yamuna
Bara Shigri	Chenab
Milam	Mandakini
Siachen	Nubra
Zemu	Manas

Which of the pairs given above are correctly matched?

- (a) 1, 2 and 4
- (b) 1, 3 and 4
- (c) 2 and 5
- (d) 3 and 5

Answer: A

Mandakini River originates from Choribari glacier.

Zemu Glacier is the largest glacier in the Eastern Himalaya. It is about 26 kilometres in length and is located at the base of Kangchenjunga in the Himalayan region of Sikkim.

The Manas River is a transboundary river in the Himalayan foothills between southern Bhutan and India. It is the largest river system of Bhutan.

Besides, Nubra and Yamuna originates from the respective glaciers i.e., Siachen and Bandarpunch.

18. In India, the use of carbofuran, methylparathion, phorate and triazophos is viewed with apprehension. These chemicals are used as

- (a) pesticides in agriculture
- (b) preservatives in processed foods
- (c) fruit-ripening agents
- (d) moisturising agents in cosmetics

Answer: A

These are used as pesticides in India and are used to control insects in a wide variety of field crops. These are systemic insecticides, which mean that the plant absorbs it through the roots, and from here the plant distributes it

throughout its organs where insecticidal concentrations are attained. These are highly toxic for vertebrates, particularly to birds.

19. Consider the following statements:

- 1. Under Ramsar Convention, it is mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.
- 2. The Wetlands (Conservation and Management) Rules, 2010 were framed by the Government of India based on the recommendations of Ramsar Convention.
- 3. The Wetlands (Conservation and Management) Rules, 2010 also encompass the drainage area or catchment regions of the wetlands as determined by the authority.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: B

The Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Under the “three pillars” of the Convention, the Contracting Parties commit to work towards the wise use of all their wetlands; designate suitable wetlands for the list of Wetlands of International Importance (the “Ramsar List”) and ensure their effective management; cooperate internationally on transboundary wetlands, shared wetland systems and shared species.

Thus, it doesn't talk about 'all' wetlands in the territory of a country.

The convention entered into force in India on 1 February 1982.

20. Consider the following statements:

- 1. Agricultural soils release nitrogen oxides into environment.
- 2. Cattle release ammonia into environment.

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3. Poultry industry releases reactive nitrogen compounds into environment. Which of the statements given above is/ are correct?

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 2 only
- (d) 1, 2 and 3

Answer: D

Agricultural soils represent a very large, and growing, global source of nitrous oxide. Current estimates for annual emissions from this source range from 2 to about 4 million tonnes of nitrous oxide-N globally.

Across the globe, livestock spew 14.5 percent of all greenhouse gases (methane, carbon dioxide, nitrous oxide and fluorinated gases) released in the environment, and over half that comes specifically from cows, according to a United Nations report.

21. What is common to the places known as Aliyar, Isapur and Kangsabati?

- (a) Recently discovered uranium deposits
- (b) Tropical rain forests
- (c) Underground cave systems
- (d) Water reservoirs

Answer: D

All three are water reservoirs.

Aliyar Dam is a charming location surrounded by Annamali Hills with wonderful natural views. It is located between Pollachi and Valparai.

Isapur Dam is an earth field dam on Penganga river in the state of Maharashtra.

Kangasabati Dam is the second largest earthen dam of India in the state of West Bengal.

22. In the context of proposals to the use of hydrogen-enriched CNG (H-CNG) as fuel for buses in public transport, consider the following statements:

- 1. The main advantage of the use of H-CNG is the elimination of carbon monoxide emissions.
- 2. H-CNG as fuel reduces carbon dioxide and hydrocarbon emissions.
- 3. Hydrogen up to one-fifth by volume can be blended with CNG as fuel for buses.
- 4. H-CNG makes the fuel less expensive than CNG.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 4 only
- (d) 1, 2, 3 and 4

Answer: B

HCNG reduces emissions of Carbon Monoxide up to 70% but does not eliminate it. It enables up to 5 % savings in fuel. Thus statement 1 is incorrect.

The ratio of natural gas to hydrogen in hydrogen-CNG (H-CNG) is 80 per cent natural gas and 20 per cent hydrogen by volume. This has been determined to be the best ratio when all factors such as emissions reduction, cost, and storage capacity are considered.

With reduced part of CNG in H-CNG and improved mileage, reduces the emission of carbon dioxide and Hydrocarbon.

23. Why are dewdrops not formed on a cloudy night?

- (a) Clouds absorb the radiation released from the Earth's surface.
- (b) Clouds reflect back the Earth's radiation.
- (c) The Earth's surface would have low temperature on cloudy nights.
- (d) Clouds deflect the blowing wind to ground level.

Answer: B

Because on a cloudy night, the clouds send the heat back to the ground so the ground never gets cold enough for the dew to be formed.

Dew drops are formed due to condensation of water vapours. Air around us contains water vapours which we call moisture or humidity. Hot air contains more moisture as compared to cold air. During the night when the hot air comes into contact with some cold surface due to the reflection of earth radiation by clouds, water vapour present in it condenses on the cold surface in the form of droplets. These tiny drops of water are called dew drops.

24. With reference to the cultivation of Kharif crops in India in the last five years, consider the following statements:

- 1. Area under rice cultivation is the highest.

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2. Area under the cultivation of jowar is more than that of oilseeds.
3. Area of cotton cultivation is more than that of sugarcane.
4. Area under sugarcane cultivation has steadily decreased.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 2, 3 and 4 only
- (c) 2 and 4 only
- (d) 1, 2, 3 and 4

Answer: A

1. Area under rice cultivation in India, in 2014 was 44.14 million hectares. In 2017 it became 43.19 million hectares which is highest amongst all.
2. Area under jowar cultivation annually 17 to 18 million hectares. And oilseed area – 28 million hectares (2013-14), 26.1 million hectares (2015-16). Hence area under oilseed cultivation is more than jowar cultivation.
3. Area under sugarcane cultivation 4.95 million hectare (2013-14), 5.066 million hectares (2014-15), 4.953 million hectares (2015-16). Hence it has not a steady decrease for sugarcane.
4. Area under cotton cultivation—11.9 million hectares (2013-14), 12.81 million hectare (2014-15) and 11.72 million hectares (2015-16). Hence area under cotton cultivation is more than sugar cultivation.

(Annual report 2016-17, Ministry of Agriculture)

Hence only statements 1 and 3 are correct.

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POLITY

1. Consider the following statements:
 1. The 44th Amendment to the Constitution of India introduced an Article placing the election of the Prime Minister beyond judicial review.
 2. The Supreme Court of India struck down the 99th Amendment to the Constitution of India as being violative of the independence of judiciary.

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

The 44th amendment of the Indian Constitution was significant as it removed partially the distortions that were introduced into the Constitution by 42. But it had no Proposal of an Article placing the election of the Prime Minister beyond judicial review.

A five judge Bench in the NJAC case, in a majority of 4:1 rejected the NJAC Act brought in by the 99th constitutional amendment by stating it as "unconstitutional and void." Justice Kehar stated that the expectation from the judiciary, to safeguard the rights of the citizens of this country, can only be ensured, by keeping it absolutely insulated and independent, from the other organs of governance and the Proposed NJAC violated the Independence of the Judiciary.

2. Consider the following statements:
 1. The motion to impeach a Judge of the Supreme Court of India cannot be rejected by the Speaker of the Lok Sabha as per the Judges (Inquiry) Act, 1968.
 2. The Constitution of India defines and gives details of what constitutes 'incapacity and proved misbehaviour' of the Judges of the Supreme Court of India.
 3. The details of the process of impeachment of the Judges of the Supreme Court of India are given in the Judges (Inquiry) Act, 1968.
 4. If the motion for the impeachment of a Judge is taken up for voting, the law

requires the motion to be backed by each House of the Parliament and supported by a majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.

Which of the statements given above is/ are correct?

- (a) 1 and 2
- (b) 3 only
- (c) 3 and 4 only
- (d) 1, 3 and 4

Answer: C

The motion to impeach a Judge of the Supreme Court of India can be rejected by the Speaker of the Lok Sabha as per the Judges (Inquiry) Act, 1968.

The Constitution of India does not defines and gives details of the term 'incapacity and proved misbehaviour' of the Judges of the Supreme Court of India which are the cretyeria for the impeachment of the Judges.

The details of the process of impeachment of the Judges of the Supreme Court of India are given in the Judges (Inquiry) Act, 1968.

the motion for the impeachment of a Judge is taken up for voting, the law requires the motion to be backed by each House of the Parliament and supported by a majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.

Note: Elimination of the option helps in getting the answers.

3. The Ninth Schedule was introduced in the Constitution of India during the prime ministership of
 - (a) Jawaharlal Nehru
 - (b) Lal Bahadur Shastri
 - (c) Indira Gandhi
 - (d) Morarji Desai

Answer: A

The first amendment to the Indian Constitution added the Ninth Schedule to it. It was introduced by the Nehru Government, on 10 May 1951 to address judicial decisions and pronouncements especially about the chapter on fundamental rights. Nehru was also very clear on the purpose behind the first amendment. The state wanted to pursue

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nationalisation, take away lands from the zamindars, re-distribute them, and make special provisions for the socially and economically backward.

4. Consider the following statements:
1. The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification on the grounds of 'Office of Profit'.
 2. The above-mentioned Act was amended five times.
 3. The term 'Office of Profit' is well-defined in the Constitution of India.
- Which of the statements given above is/ are correct?
- (a) 1 and 2 only
 - (b) 3 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

Answer: A

Temporary suspension of disqualification in certain cases Under The Parliament (Prevention of Disqualification) Act, 1959 If a person being a member of Parliament who immediately before the commencement of this Act held an office of profit declared by any law repealed by this Act not to disqualify the holder thereof for being such member, becomes so disqualified by reason of any of the provisions contained in this Act, such office shall not, if held by such person for any period not exceeding beyond a period of six months from the commencement of this Act disqualify him for being a member of Parliament. It has been amended 5 times till date. The office of profit is not defined in the constitution. Rather its meaning is ascertained through Supreme Court judgments and Election Commission Guidelines.

5. Under which Schedule of the Constitution of India can the transfer of tribal land to private parties for mining be declared null and void?
- (a) Third Schedule
 - (b) Fifth Schedule
 - (c) Ninth Schedule
 - (d) Twelfth Schedule

Answer: B

The purpose of Scheduled Areas, as also recognised in several judgments, is to preserve

the tribal autonomy, their culture and economic empowerment, to ensure social, economic and political justice, and preservation of peace and good governance. It is with this object in mind that the Constitution created the Fifth Schedule which has famously been called "A Constitution within a Constitution". Thus to safeguard cultural autonomy and empower the tribal the fifth schedule, the constitution defines the power of the transfer of the tribal land to private parties for mining.

6. Consider the following statements about Particularly Vulnerable Tribal Groups (PVTGs) in India:
1. PVTGs reside in 18 States and one Union Territory.
 2. A stagnant or declining population is one of the criteria for determining PVTG status.
 3. There are 95 PVTGs officially notified in the country so far.
 4. Irular and Kanda Reddi tribes are included in the list of PVTGs.
- Which of the statements given above are correct?
- (a) 1, 2 and 3
 - (b) 2, 3 and 4
 - (c) 1, 2 and 4
 - (d) 1, 3 and 4

Answer: C

Particularly vulnerable tribal group (PVTG) (earlier: Primitive tribal group) is a government of India classification created with the purpose of enabling improvement in the conditions of certain communities with particularly low development indices. The features of such a group include a pre-agricultural system of existence that is practice of hunting and gathering, *zero or negative population growth*, extremely low level of literacy in comparison with other tribal groups. PVTGs reside in 18 States and one Union Territory of Andaman and Nicobar islands. There are 75 PVTGs officially notified in the country so far. The Konda Reddis designated PVTG are found in the Indian state of Andhra Pradesh and Irular are designated PVTG in the Indian state of Tamil Nadu.

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7. With reference to the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?
- (a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
 - (b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.
 - (c) In the event of grave financial crisis in the country, the President of India can declare Financial Emergency without the counsel from the Cabinet.
 - (d) State Legislatures cannot make laws on certain matters without the concurrence of Union Legislature.

Answer: B

Article 142. Enforcement of decrees and orders of Supreme Court and unless as to discovery, etc . The Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it, and any decree so passed or orders so made shall be enforceable throughout the territory of India in such manner as may be prescribed by or under any law made by Parliament and, until provision in that behalf is so made, in such manner as the President may by order prescribe. Subject to the provisions of any law made in this behalf by Parliament, the Supreme Court shall, as respects the whole of the territory of India, have all and every power to make any order for the purpose of securing the attendance of any person, the discovery or production of any documents, or the investigation or punishment of any contempt of itself.

8. With reference to the Legislative Assembly of a State in India, consider the following statements:
- 1. The Governor makes a customary address to Members of the House at the commencement of the first session of the year.

2. When a State Legislature does not have a rule on a particular matter, it follows the Lok Sabha rule on that matter.

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

Article 176(1) of the Constitution of India enjoins that the Governor shall Address both the Houses assembled together at the commencement of the first Session after each general election to the Assembly and at the commencement of the first session of each year and inform the Legislature of the causes of its Summons. The Address of the Governor contains a review of the activities and Achievements of the Government during the previous year and their policy with regard to important internal problems as well as a brief account of the programme of Government Business for the session.

The State legislature is a constitutional body and derives its power from the Constitution itself and not from the centre. Thus it is in its complete Sovereignty (Speaker has the complete responsibility of rules of procedure and conduct of business) to formulate any rule for the proper functioning of the business in the house within the constitutional premise.

9. Which Article of the Constitution of India safeguards one's right to marry the person of one's choice?
- (a) Article 19
 - (b) Article 21
 - (c) Article 25
 - (d) Article 29

Answer: B

The right to marry is a part of right to life under Article 21 of Indian Constitution. Right to marriage is also stated under Human Rights Charter within the meaning of right to start a family. The right to marry is a universal right and it is available to everyone irrespective of their gender. Various courts across the country have also interpreted right to marry as an integral part of right to life under Article 21. The

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SC has reaffirmed this in the recent ruling in the Hadiya Case.

10. Which one of the following suggested that the Governor should be an eminent person from outside the State and should be a detached figure without intense political links or should not have taken part in politics in the recent past?

- (a) First Administrative Reforms Commission (1966)
- (b) Rajamannar Committee (1969)
- (c) Sarkaria Commission (1983)
- (d) National Commission to Review the Working of the Constitution (2000)

Answer: C

The first centre State relation commission, Sarkaria Commission voiced for the independency and neutral role of the governor in the states. In this back drop it recommended that the appointment of the governor has to be democratic which will lead to impartial functioning of the office.

Recommendations on Appointment of Governor:

- (i) should be an eminent person;
- (ii) must be a person from outside the State;
- (iii) must not have participated in active politics at least for some time before his appointment;
- (iv) he should be a detached person and not too intimately connected with the local politics of the State;
- (v) he should be appointed in consultation with the Chief Minister of the State, Vice-President of India and the Speaker of the Lok Sabha;
- (vi) His tenure of office must be guaranteed and should not be disturbed except for extremely compelling reasons and if any action is to be taken against him he must be given a reasonable opportunity for showing cause against the grounds on which he is sought to be removed. In case of such termination or resignation of the Governor, the Government should lay before both the Houses of Parliament a statement explaining the circumstances leading to such removal or resignation, as the case may be;
- (vii) After demitting his office, the person appointed as Governor should not be eligible for any other appointment or office of profit under the Union or a State Government except for a second term as Governor or election as

Vice-President or President of India, as the case may be; and

(viii) At the end of his tenure, reasonable post-retirement benefits should be provided.

11. In India, which of the following review the independent regulators in sectors like telecommunications, insurance, electricity, etc.?

- 1. Ad Hoc Committees set up by the Parliament
- 2. Parliamentary Department Related Standing Committees
- 3. Finance Commission
- 4. Financial Sector Legislative Reforms Commission
- 5. NITI Aayog

Select the correct answer using the code given below.

- (a) 1 and 2
- (b) 1, 3 and 4
- (c) 3, 4 and 5
- (d) 2 and 5

Answer: A

The Parliamentary committees are established to study and deal with various matters that cannot be directly handled by the legislature due to their volume. They also monitor the functioning of the executive branch.

The Parliamentary committees are of two kinds - *Standing or permanent committees* and *Ad hoc committees*. The former are elected or appointed periodically and they work on a continuous basis. The latter are created on an ad hoc basis as the need arises and they are dissolved after they complete the task assigned to them. They are responsible to review the independent regulators in sectors like telecommunications, insurance, electricity, etc.

(Note: the answer is more correctly derived by elimination as the last three has well known directive for functioning.)

12. With reference to the Constitution of India, consider the following statements:

- 1. No High Court shall have the jurisdiction to declare any central law to be constitutionally invalid.
- 2. An amendment to the Constitution of India cannot be called into question by the Supreme Court of India.

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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

High Courts are Constitutional courts. They are the principal civil courts of original jurisdiction in each state and union territory. They have the jurisdiction to declare any central law to be constitutionally invalid.

The Supreme Court is the guardian of the Constitution. In this capacity, anything that ultravires the constitution is cut down by the highest judiciary including the Constitutional amendment. The basic structure of the constitution derived in the Kesava Nanda Bharti case, 1973 plays an extremely important role in this function.

13. In the context of polity, which one of the following would you accept as the most appropriate definition of liberty?
- (a) Protection against the tyranny of political rulers
 - (b) Absence of restraint
 - (c) Opportunity to do whatever one likes
 - (d) Opportunity to develop oneself fully

Answer: D

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Economy

1. Consider the following statements:
 1. Most of India's external debt is owed by governmental entities.
 2. All of India's external debt is nominated in US dollars.
 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

Commercial borrowings continued to be the largest component of external debt with a share of 37.4 per cent, followed by NRI deposits (24.1 per cent) and short-term trade credit (19.9 per cent).

US dollar denominated debt continued to be the largest component of India's external debt with a share of 45.9 percent at end December 2018, followed by the Indian rupee (24.8 percent), SDR (5.1 percent), yen (4.9 percent) and euro (3.1 percent).

<https://dea.gov.in/sites/default/files/India%27s%20External%20Debt%20as%20at%20the%20end%20December%202018.pdf>

2. Which of the following is not included in the assets of a commercial bank in India?
 - (a) Advances
 - (b) Deposits
 - (c) Investments
 - (d) Money at call and short notice

Answer: B

Greatest		Least
L	Cash-in-hand	
I	Cash at the central bank	P
Q	Money at call or short notice	R
U	Bills discounted	O
I	Government securities within one year of maturity	F
D	Certificates of deposit	I
I	Investments	T
T	Loans and advances	A
Y		B
		I
		L
		I
		T
		Y
Least	Special Deposits at central bank	Greatest

3. In the context of India, which of the following factors is/ are contributor/ contributors to reducing the risk of a currency crisis?
 1. The foreign currency earnings of India's IT sector
 2. Increasing the government expenditure
 3. Remittances from Indians abroad
 Select the correct answer using the code given below.
 - (a) 1 only
 - (b) 1 and 3 only
 - (c) 2 only
 - (d) 1, 2 and 3

Answer: B

Option 1 and 3 will bring foreign currency, which will contribute in reducing the risk of a currency crisis. Option 2 will not bring foreign currency except if a foreign company does the work.

4. Consider the following statements:
 1. The United Nations Convention against Corruption (UNCAC) has a 'Protocol against the Smuggling of Migrants by Land, Sea and Air'.
 2. The UNCAC is the ever-first legally binding global anti-corruption instrument.
 3. A highlight of the United Nations Convention against Transnational Organized Crime (UNTOC) is the inclusion of a specific chapter aimed at returning assets to their rightful owners from whom they had been taken illicitly.
 4. The United Nations Office on Drugs and Crime (UNODC) is mandated by its member States to assist in the implementation of both UNCAC and UNTOC.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 2 and 4 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

Answer: C

The first statement is wrong as it is under the UN convention against trans-national organised crime.

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The United Nations Convention against Corruption is the only legally binding universal anti-corruption instrument.

The Convention UNTOC is supplemented by three Protocols, which target specific areas and manifestations of organized crime: the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children; the Protocol against the Smuggling of Migrants by Land, Sea and Air; and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition. Countries must become parties to the Convention itself before they can become parties to any of the Protocols.

Statements 2, 3 and 4 are correct.

<https://www.unodc.org/unodc/en/corruption/the-matic-areas.html>

5. Which of the following is issued by registered foreign portfolio investors to overseas investors who want to be part of the Indian stock market without registering themselves directly?
- Certificate of Deposit
 - Commercial Paper
 - Promissory Note
 - Participatory Note

Answer: D

Participatory notes also referred to as P-Notes, or PNs, are financial instruments required by investors or hedge funds to invest in Indian securities without having to register with the Securities and Exchange Board of India (SEBI).

6. With reference to India's Five-Year Plans, which of the following statements is/are correct?
- From the Second Five-Year Plan, there was a determined thrust towards substitution of basic and capital good industries.
 - The Fourth Five-Year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.
 - In the Fifth Five-Year Plan, for the first time; the financial sector was included as an integral part of the Plan.

Select the correct answer using the code given below.

- 1 and 2 only

- 2 only
- 3 only
- 1, 2 and 3

Answer: A

From the Second Five-Year Plan, to save the valuable foreign exchange and give a boost to the domestic industrial sector, the Indian government promoted import substitution.

The Fourth Five-Year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.

In 1969 the Indian government nationalised 14 major private banks; one of the big banks was Bank of India. It was the first time when the financial sector was included as an integral part of the plan.

7. With reference to Asian Infrastructure Investment Bank (AIIB), consider the following statements:

- AIIB has more than 80 member nations.
- India is the largest shareholder in AIIB.
- AIIB does not have any members from outside Asia

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: A

The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia. Headquartered in Beijing, we began operations in January 2016 and have now grown to 97 approved members worldwide. Outside Asia Members: Australia, New Zealand.

<https://www.aiib.org/en/about-aiib/index.html>

8. What was the purpose of Inter-Creditor Agreement signed by Indian banks and financial institutions recently?

- To lessen the Government of India's perennial burden of fiscal deficit and current account deficit
- To support the infrastructure projects of Central and State Governments

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- (c) To act as independent regulator in case of applications for loans of Rs. 50 crore or more
- (d) To aim at faster resolution of stressed assets of Rs. 50 crore or more which are under consortium lending

Answer: D

The agreement, known as Inter-Creditor Agreement (ICA) was framed under the aegis of the Indian Banks' Association and follows the recommendations of the Sunil Mehta Committee on stressed asset resolution. ICA is an agreement among banks that have dues from a borrower in the stress.

<https://www.thehindu.com/business/Economy/banks-agree-to-resolve-stressed-assets-quickly/article24497728.ece>

9. The Chairmen of public sector banks are selected by the
- (a) Banks Board Bureau
 - (b) Reserve Bank of India
 - (c) Union Ministry of Finance
 - (d) Management of concerned bank

Answer: A

The Chairmen of public sector banks are selected by the BBB and appointed by the Finance Ministry. On the recommendation of the BBB, the Appointment Committee of Cabinet takes the final decision.

<http://www.banksboardbureau.org.in/Home/Index>
<https://economictimes.indiatimes.com/industry/banking/finance/banking/bbb-recommends-22-gms-for-elevation-as-executive-directors-at-psu-banks/articleshow/64620925.cms>

10. Consider the following statements:
1. Petroleum and Regulatory Board (PNGRB) is the first regulatory body set up by the Government of India.
 2. One of the tasks of PNGRB is to ensure competitive markets for gas.
 3. Appeals against the decisions of PNGRB go before the Appellate Tribunals for Electricity.
- Which of the statements given above are correct?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only

- (d) 1, 2 and 3

Answer: B

TRAI is the first independent regulatory body set up by the government of India.

<https://www.oecd.org/gov/regulatory-policy/44925979.pdf>

Vision of PNGNRB:

"To create a vibrant energy market with rapid and orderly growth through facilitation of flow of investments into the basic infrastructure for efficient transportation and distribution of petroleum, petroleum products and natural gas at minimum cost and high level of protection of consumer interests through fair trade practices and competition amongst the entities so as to ensure the enhanced competitiveness of Indian economy and customer satisfaction." So Statement 2 is correct.

Section 30 (1) of the PGNRB Act: Subject to the provisions of this Act, the Appellate Tribunal established under section 110 of the Electricity Act, 2003 (36 of 2003) shall be the Appellate Tribunal for the purposes of this Act and the said Appellate Tribunal shall exercise the jurisdiction, powers and authority conferred on it by or under this Act. So statement 3 is correct.

11. Which one of the following is not a sub-index of the World Bank's 'Ease of Doing Business Index'?
- (a) Maintenance of law and order
 - (b) Paying taxes
 - (c) Registering property
 - (d) Dealing with construction permits

Answer: A

A nation's ranking on the index is based on the average of 10 subindices:

- Starting a business – Procedures, time, cost and minimum capital to open a new business
- Dealing with construction permits – Procedures, time and cost to build a warehouse
- Getting electricity – procedures, time and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse
- Registering property – Procedures, time and cost to register commercial real estate
- Getting credit – Strength of legal rights index, depth of credit information index

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- Protecting investors – Indices on the extent of disclosure, extent of director liability and ease of shareholder suits
- Paying taxes – Number of taxes paid, hours per year spent preparing tax returns and total tax payable as share of gross profit
- Trading across borders – Number of documents, cost and time necessary to export and import
- Enforcing contracts – Procedures, time and cost to enforce a debt contract
- Resolving insolvency – The time, cost and recovery rate (%) under bankruptcy proceeding

(World Bank Website)

12. Among the agricultural commodities imported by India, which one of the following accounts for the highest imports in terms of value in the last five years?
- (a) Spices
 - (b) Fresh fruits
 - (c) Pulses
 - (d) Vegetable oils

Answer: D

India is known to export spices to the world. Some fruits we import while some we export but horticultural trade is not a huge portion of the import bill. India has started importing pulses with long term contractual obligations in past few years but India also produces quite a large amount of pulses itself. Moreover, pulses are not very costly compared to other high end agricultural products. Thus, logically, it should be vegetable oils. India imports huge amount of and various types of vegetable oil from many countries. India relies on imports for almost 70% of its vegetable oil consumption. India's import bill of vegetable oil has been surging for past many years.

13. The Global Competitiveness Report is published by the
- (a) International Monetary Fund
 - (b) United Nations Conference on Trade and Development
 - (c) World Economic Forum
 - (d) World Bank

Answer: C

The Global Competitiveness Report is a yearly report published by the World Economic Forum.

Since 2004. Itranks countries based on the Global Competitiveness Index.

14. In a given year in India, official poverty lines are higher in some States than in others because
- (a) poverty rates vary from State to State
 - (b) price levels vary from State to State
 - (c) Gross State Product varies from State to State
 - (d) Quality of public distribution varies from State to State

Answer: B

Poverty line depends upon income profile of the population vis-à-vis cost of standard basket of consumption. Thus, it is a function of cost of consumption basket which varies from state to state. It is not related to GSDP or quality of public distribution services.

15. Consider the following statements:
1. Coal sector was nationalized by the Government of India under Indira Gandhi.
 2. Now, coal blocks are allocated on lottery basis.
 3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is self-sufficient in coal production.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: A

Indira Gandhi nationalised all coal mining blocks in early 1970s. Right to extract coal from demarcated blocks is offered on the basis of auction, not lottery. Despite having large reserves of coal, Indian coal quality is not very good. Also, the supply lines are not very efficient and thus many power plants in India import coal. Eg Indonesia supplies thermal coal to power plants run by Tatas and Adanis. Thus, India is not self-reliant in coal production.

16. The money multiplier in an economy increases with which one of the following?
- (a) Increase in the cash reserve ratio

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- (b) increase in the banking habit of the population
- (c) Increase in the statutory liquidity ratio
- (d) Increase in the population of the country

Answer: B

In fractional banking system, money multiplier is a key element. As more people start banking and depositing money into banks, banks can lend even more. It thus creates more money in the system.

17. In India, 'extended producer responsibility' was introduced as an important feature in which of the following?
- (a) The Bio-medical Waste (Management and Handling) Rules, 1998
 - (b) The Recycled Plastic (Manufacturing and Usage) Rules, 1999
 - (c) The e-Waste (Management and Handling) Rules, 2011
 - (d) The Food Safety and Standard Regulations, 2011

Answer: C

The e-Waste (Management and Handling) Rules, 2011 recognises producers' liability for recycling and reducing e-waste in the country. It introduced 'extended producer responsibility', that is, the responsibility of producers of electronic equipment for effective channelisation of E-waste to the registered recyclers.

18. The economic cost of food grains to the Food Corporation of India is Minimum Support Price and bonus (if any) paid to the farmers plus
- (a) transportation cost only
 - (b) interest cost only
 - (c) procurement incidentals and distribution cost
 - (d) procurement incidentals and charges for godowns

Answer: C

The economic cost of food grains procured by the Food Corporation of India (FCI) is a total of Minimum Support Price and bonus (if any) paid to the farmers plus the procurement incidentals and distribution cost. The economic cost has three main components - procurement cost, procurement price, and distribution cost. The

procurement incidentals are the initial costs incurred during procurement of foodgrains. The FCI buys foodgrains from the farmers at the pre-announced Minimum Support Price. The distribution costs include freight, handling charges, storage charges, losses during transit and establishment cost.

19. Consider the following statements:

1. Purchasing Power Parity (PPP) exchange rates are calculated by comparing the prices of the same basket of goods and services in different countries.
2. In terms of PPP dollars, India is the sixth largest economy in the world.

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

PPP is an economic theory that compares different countries' currencies through a "basket of goods" approach.

According to this concept, two currencies are in equilibrium—known as the currencies being at par—when a basket of goods is priced the same in both countries, taking into account the exchange rates. In terms of PPP dollars, India is the third largest economy in the world.

20. Which one of the following is not the most likely measure the Government/RBI takes to stop the slide of Indian rupee?

- (a) Curbing imports of non-essential goods and promoting exports
- (b) Encouraging Indian borrowers to issue rupee denominated Masala
- (c) Easing conditions relating to external commercial borrowing
- (d) Following an expansionary monetary policy

Answer: D

Expansionary monetary policy is when a central bank uses its tools to stimulate the economy. That increases the Money supply, lowers the interest rate and increases the aggregate demand. It boosts the growth as measured by

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GDP. It lowers the value of the currency, thereby decreasing the exchange rate.

21. Consider the following statements:

The Reserve Bank of India's recent directives relating to 'Storage of Payment System Data', popularly known as data diktat, command the payment system providers that

1. they shall ensure that entire data relating to payment systems operated by them are stored in a system only in India
2. they shall ensure that the systems are owned and operated by public sector enterprises
3. they shall submit the consolidated system audit report to the Comptroller and Auditor General of India by the end of the calendar year

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: A

The RBI has given the following directives relating to Storage of Payment System Data:

- i. All system providers shall ensure that the entire data relating to payment systems operated by them are stored in a system only in India. This data should include the full end-to-end transaction details / information collected / carried / processed as part of the message / payment instruction. For the foreign leg of the transaction, if any, the data can also be stored in the foreign country, if required.
- ii. System providers shall ensure compliance of (i) above within a period of six months and report compliance of the same to the Reserve Bank latest by October 15, 2018.
- iii. System providers shall submit the System Audit Report (SAR) on completion of the requirement at (i) above. The audit should be conducted by CERT-IN empaneled auditors certifying completion of activity at (i)

above. The SAR duly approved by the Board of the system providers should be submitted to the Reserve Bank not later than December 31, 2018.

Thus Option A gives the right answer.

22. The Service Area Approach was implemented under the purview of

- (a) Integrated Rural Development Programme
- (b) Lead Bank Scheme
- (c) Mahatma Gandhi National Rural Employment Guarantee Scheme
- (d) National Skill Development Mission

Answer: B

The lead bank scheme was established in 1969 with the adoption of an area approach for bridging the spatial and structural credit gaps. The basic idea was to have an "area approach" for targeted and focused banking. The banker's committee, headed by S. Nariman, concluded that districts would be the units for area approach and each district could be allotted to a particular bank which will perform the role of a Lead Bank.

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SCIENCE AND TECH

1. Consider the following statements:
 1. According to the Indian Patents Act, a biological process to create a seed can be patented in India.
 2. In India, there is no Intellectual Property Appellate Board.
 3. Plant varieties are not eligible to be patented in India.

Which of the statements given above is/are correct?

(a) 1 and 3 only
 (b) 2 and 3 only
 (c) 3 only
 (d) 1, 2 and 3

Answer: C

Explanation: *Article 3(j) excludes from patentability "plants and animals in whole or in any part thereof other than microorganisms but including seeds, varieties, and species, and essentially biological processes for production or propagation of plants and animals". Hence, Statement 1 is not correct.*

The Intellectual Property Appellate Board (IPAB) was constituted on September 15, 2003 by the Indian Government to hear and resolve the appeals against the decisions of the registrar under the Indian Trademarks Act, 1999 and the Geographical Indications of Goods (Registration and Protection) Act, 1999. **Hence, statement 2 is not correct.**

2. With reference to communication technologies, what is/are the difference/differences between LTE (Long-Term Evolution) and VoLTE (Voice over Long-Term Evolution)?
 1. LTE is commonly marketed as 3G and VoLTE is commonly marketed as advanced 3G.
 2. LTE is data-only technology and VoLTE is voice-only technology.

Which of the statements is/are correct?

(a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 nor 2

Answer: D

Explanation: VoLTE is a technology update to the LTE protocol used by mobile phone networks. Under LTE, the infrastructure of telecom players only allows transmission of data while voice calls are routed to their older 2G or 3G networks. This is why, under LTE, you cannot access your 4G data services while on a call. This leads to problems such as slow internet speeds and poor voice clarity. VoLTE allows voice calls to be 'packaged' and carried through LTE networks. This would mean 4G data accessibility even during calls. VoLTE is an Internet Protocol Multimedia Subsystem (IMS) specification which enables a variety of services to operate seamlessly on the network rather than having to switch to different applications for voice or video.

3. Recently, India signed a deal known as 'Action Plan for Prioritization and Implementation of Cooperation Areas in the Nuclear Field' with which of the following countries?
 - (a) Japan
 - (b) Russia
 - (c) The United Kingdom
 - (d) The United States of America

Answer: B

Explanation: During the visit of H. E. Vladimir Putin, President of the Russian Federation to India, Action Plan for Prioritization and Implementation of Co-operation Areas in the Nuclear Field Identified Jointly by India and Russia was signed on 5th October, 2018 in New Delhi. The two countries intent to develop a project of six nuclear power units of Russian design at a new site in India, further enhance cooperation in the third countries and bring in new perspective nuclear technologies together with joint construction of nuclear power plants.

4. In the context of digital technologies for entertainment consider the following statements:
 1. In Augmented Reality (AR), a simulated environment is created and the physical world is completely shut out.
 2. In Virtual Reality (VR), images generated from a computer are projected onto real-life objects or surroundings.

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3. AR allows individuals to be present in the world and improves the experience using the camera of smart-phone or PC.
4. VR closes the world, and transposes an individual, providing complete immersion experience.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 3 and 4
- (c) 1, 2 and 3
- (d) 4 only

Answer: B

Explanation: Virtual reality (VR) is an artificial, computer-generated simulation or recreation of a real life environment or situation. It immerses the user by making them feel like they are experiencing the simulated reality first-hand, primarily by stimulating their vision and hearing. Hence statement 2 is not correct but 4 is correct.

Augmented reality (AR) is a technology that layers computer-generated enhancements atop an existing reality in order to make it more meaningful through the ability to interact with it. AR is developed into apps and used on mobile devices to blend digital components into the real world in such a way that they enhance one another, but can also be told apart easily. Hence statement 1 is not correct but 3 is correct.

5. The word 'Denisovan' is sometimes mentioned in media in reference to
 - (a) fossils of a kind of dinosaurs
 - (b) an early human species
 - (c) a cave system found in North-East India
 - (d) a geological period in the history of Indian subcontinent

Answer: B

Explanation: Scientists sifting through the genomes of people scattered across the islands of south-east Asia have found echoes of ancient pairings with not just one, but three separate populations of the archaic hominins known as Denisovans. First discovered in 2010, the Denisovans are a relatively recent addition to the human family tree.

6. With reference to the recent developments in science, which one of the following statements is not correct?

- (a) Functional chromosomes can be created by joining segments of DNA taken from cells of different species.
- (b) Pieces of artificial functional DNA can be created in laboratories.
- (c) A piece of DNA taken out from an animal cell can be made to replicate outside a living cell in a laboratory.
- (d) Cells taken out from plants and animals can be made to undergo cell division in laboratory petri dishes.

Answer: ??

In our opinion the question is wrong. Statement 1 is how we define recombinant DNA technology, Statement 2 is also right and the process is called as polynucleotide synthesis. Statement 3 is referring to polymerase chain reaction and statement 4 is all about tissue culture.

7. Consider the following statements:

A digital signature is

1. an electronic record that identifies the certifying authority issuing it
2. used to serve as a proof of identity of an individual to access information or server on Internet
3. an electronic method of signing an electronic document and ensuring that 'the original content is unchanged'

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: D

Explanation: Digital signatures offer many advantages. Not only you know that a certain person has signed a specific document (statement 1 is correct) but that was also the exact information he signed. Once a digital signature has been placed the document cannot be altered anymore (statement 3 is correct), or it will lead to an invalid digital signature. Next to that digital signatures can be used for many purposes such as contracts,

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payment instructions, confirmations but of course also to maintain the integrity of the data. A digital signature is based on public key cryptography, which means that every user has a secret and a public key. The secret key is used to place a digital signature on e.g. a document and with the public key the signature can be verified. To maintain the integrity of the public key it will be made available in the form of a certificate. There are several levels of trust possible for certificates, ranging from self-signed to qualified certificates. Important for digital signatures is proof of identity of the holder of the certificate, and eliminating risks in the process as much as possible. (Statement 2 is correct)

8. In the context of wearable technology, which of the following tasks is/are accomplished by wearable devices?

1. Location identification of a person
 2. Sleep monitoring of a person
 3. Assisting the hearing-impaired person
- Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: D

Explanation: Wearable technology works in the health care space eg fitness and sleep trackers like embrace help record heart rate and sleep pattern. It can be connected through GPS and can identify locations. It also assists the hearing-impaired persons. Hence all the statements are correct.

9. 'RNA interference (RNAi)' technology has gained popularity in the last few years. Why?

1. It is used in developing gene-silencing therapies
2. It can be used in developing therapies for the treatment of cancer.
3. It can be used to develop hormone replacement therapies.
4. It can be used to produce crop plants that are resistant to viral pathogens.

Select the correct answer using the code given below.

- (a) 1, 2 and 4

- (b) 2 and 3
- (c) 1 and 3
- (d) 1 and 4 only

Answer: A

10. Recently, scientists observed the merger of giant 'blackholes' billions of light- years away from the Earth. What is the significance of this observation?

- (a) 'Higgs boson particles' were detected.
- (b) 'Gravitational waves' were detected.
- (c) Possibility of inter-galactic space travel through 'wormhole' was confirmed.
- (d) It enabled the scientists to understand 'singularity'.

Answer: B

Explanation: In the experiment it was observed that the two black holes that merged were massive: one hole was 31 times the mass of the sun, and the other was 25 solar masses. They twisted together to form a single spinning hole 53 times more massive than our star. The missing three suns' worth of mass became energy, expelled as **gravitational waves**.

In the experiment it was observed that gravitational wave detectors, detected signals from events involving objects other than black holes. Whereas black holes emit no electromagnetic radiation and are impossible to directly observe, other potential sources of gravitational waves — colliding neutron stars, supernovas, binary star mergers — can be seen through conventional telescopes. Hence the second statement is correct.

11. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India?

1. Genetic predisposition of some people
 2. Taking incorrect doses of antibiotics to cure diseases
 3. Using antibiotics in livestock farming
 4. Multiple chronic diseases in some people
- Select the correct answer using the code given below.
- (a) 1 and 2
 - (b) 2 and 3 only
 - (c) 1, 3 and 4
 - (d) 2, 3 and 4

Answer: B

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<https://www.niaid.nih.gov/research/antimicrobial-resistance-causes>

12. What is Cas9 protein that is often mentioned in news?
- A molecular scissors used in targeted gene editing
 - A biosensor used in the accurate detection of pathogens in patients
 - A gene that makes plants pest-resistant
 - A herbicidal substance synthesized in genetically modified crops

Answer: A

Explanation: The key step in editing an organism's genome is selective targeting of a specific sequence of DNA. Two biological macromolecules, the Cas9 protein and guide RNA, interact to form a complex that can identify target sequences with high selectivity. The Cas9 protein is responsible for locating and cleaving target DNA, both in natural and in artificial CRISPR/Cas9 systems.

13. Which one of the following statements is **not** correct?
- Hepatitis B virus is transmitted much like HIV.
 - Hepatitis B, unlike Hepatitis C, does not have a vaccine.
 - Globally, the number of people infected with Hepatitis B and C viruses are several times more than those infected with HIV.
 - Some of those infected with Hepatitis B and C viruses do not show the symptoms for many years.

Answer: B

Explanation: A hepatitis B vaccine protects against hepatitis B virus (HBV) infection, a contagious disease that damages the liver. The vaccine is given as a shot. Examples of hepatitis B vaccines approved by the U.S. Food and Drug Administration (FDA) to prevent HBV infection include Engerix-B and Recombivax HB (both brand names). It proves that Hepatitis B does have a vaccine and hence, option b) is not correct.

GOVERNANCE

Schemes and Programmes of the government

- Atal Innovation Mission is set up under the
 - Department of Science and Technology
 - Ministry of Labour and Employment
 - NITI Aayog
 - Ministry of Skill Development and Entrepreneurship

Answer: C

Explanation: Atal Innovation Mission (AIM) including Self-Employment and Talent Utilization (SETU) is Government of India's endeavour to promote a culture of innovation and entrepreneurship. Its objective is to serve as a platform for promotion of world-class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities, particularly in technology driven areas.

- As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct?
 - Waste generator has to segregate waste into five categories.
 - The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
 - The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
 - It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.

Answer: C

Explanation: The new rules are now applicable beyond municipal areas and have included urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, special economic zones, places of pilgrimage, religious and historical importance, and State and Central Government organisations in their ambit.

Waste generators would now have to now segregate waste into three streams- Biodegradables, Dry (Plastic, Paper, metal, Wood, etc.) and Domestic Hazardous waste

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(diapers, napkins, mosquito repellants, cleaning agents etc.) before handing it over to the collector.

For census towns with a population below 1 million or for all local bodies having a population of 0.5 million or more, common, or stand-alone sanitary landfills will have to be set up in three years time. Also, common, or regional sanitary landfills to be set up by all local bodies and census towns with a population under 0.5 million will have to be completed in three years.

3. Consider the following statements:
The Environment Protection Act, 1986 empowers the Government of India to
1. state the requirement of public participation in the process of environmental protection, and the procedure and manner in which it is sought
 2. lay down the standards for emission or discharge of environmental pollutants from various sources

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

In the Environment Protection Act, 1986 governments enable the public to participate in decision-making, they help meet society's goal of sustainable and environmentally sound development. Public participation in environmental decision-making and, in particular, in EIA, lead to some benefits in these processes. As a result of public participation, the process of decision-making, up to and including the final decision, becomes more transparent and legitimate. This act empowers the Union Govt to take all appropriate measures to prevent and control pollutions and to establish the effective machinery for the purpose of protecting and improving the quality of the environment. It also lays down the standards for emission or discharge of environmental pollutants from various sources. Hence, both statements are correct.

4. Consider the following statements:

As per the Industrial Employment (Standing Orders) Central (Amendment) Rules, 2018:

1. if rules for fixed-term employment are implemented, it becomes easier for the firms/ companies to lay off workers
2. no notice of termination of employment shall be necessary in the case of temporary workman

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

Industrial Employment (Standing Orders) Central (Amendment) Rules, 2018 notifies fixed term employment for all sectors through an amendment to the stated Act. Fixed-term employment for all sectors will make it easier for companies to hire-and-fire workers along with reducing the role of middlemen.

As per the Industrial Employment (Standing Orders) Central (Amendment) Rules, 2018, a "fixed term employment workman is a workman who has been engaged on the basis of a written contract of employment for a fixed period".

It also brought changes like no workman employed on fixed term employment basis as a result of non-renewal of contract or employment or on its expiry shall be entitled to any notice or pay in lieu thereof, if his services are terminated. No notice of termination of employment shall be necessary in the case of temporary workman whether monthly rated, weekly rated or piece rated and probationers or badli workmen"

5. Consider the following statements:
1. As per recent amendment to the Indian Forest Act, 1927, forest dwellers have the right to fell the bamboos grown on forest areas.
 2. As per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, bamboo is a minor forest produce.
 3. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 allows ownership of minor forest produce to forest dwellers.

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Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: B

Explanation: To address the adverse living conditions of many tribal families living in forests was on account of non-recognition and vesting of pre-existing rights, a landmark legislation viz. Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, has been enacted to recognize and vest the forest rights. This Act not only recognizes the rights to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood, but also grants several other rights to ensure their control over forest resources which, inter-alia, **include right of ownership**, access to collect, use and dispose of minor forest produce, community rights such as nistar.

The Act recognises bamboo as an MFP and vests the "right of ownership, access to collect, use and dispose of minor forest produce" with Scheduled Tribes and traditional forest dwellers.

The Union Government, in a landmark initiative, has promulgated the Indian Forest (Amendment) Ordinance, 2017 to exempt bamboo grown in non-forest areas from definition of tree, thereby dispensing with the requirement of felling/transit permit for its economic use. Hence, now right to fell the bamboos is granted.

6. Consider the following statements:
1. As per law, the Compensatory Afforestation Fund Management and Planning Authority exists at both National and State levels.
 2. People's participation is mandatory in the compensatory afforestation programmes carried out under the Compensatory Afforestation Fund Act, 2016.

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

Explanation: The first statement is correct. Because the Compensatory Afforestation Fund Management and Planning Act talks about the two levels of the authority at both the national and State levels. But the second statement is not true. In fact, this a criticism of the act that people's participation is missing from the process.

7. In the context of any country, which one of the following would be considered as part of its social capital?
- (a) The proportion of literates in the population
 - (b) The stock of its buildings, other infrastructure and machines
 - (c) The size of population in the working age group
 - (d) The level of mutual trust and harmony in the society

Answer: D

Explanation: It the network of relationship among people who live and work in a particular society enabling that society to function effectively. It broadly refers to those factors of effectively functioning social groups that include such things as interpersonal relationships, a shared sense of identity, a shared understanding, shared norms, shared values, trust, cooperation, and reciprocity.

8. Which of the following adopted a law on data protection and privacy for its citizens known as 'General Data Protection Regulation' in April 2016 and started implementation of it from 25th May, 2018?
- (a) Australia
 - (b) Canada
 - (c) The European Union
 - (d) The USA

Answer: C

Explanation: The **General Data Protection Regulation (GDPR)**, agreed upon by the European Parliament and Council in April 2016, will replace the **Data Protection Directive**

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95/46/ec in Spring 2018 as the primary law regulating how companies protect EU citizens' personal data. Companies that are already in compliance with the Directive must ensure that they are also compliant with the new requirements of the GDPR before it becomes effective on May 25, 2018. Companies that fail to achieve GDPR compliance before the deadline will be subject to stiff penalties and fines.

9. Which of the following statements is/are correct regarding the Maternity Benefit (Amendment) Act, 2017?

1. Pregnant women are entitled for three months pre-delivery and three months post-delivery paid leave.
2. Enterprises with creches must allow the mother minimum six creche visits daily.
3. Women with two children get reduced entitlements.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: C

Explanation: Statement 1: Incorrect. It provides for full paid absence from birth for a period of 26 weeks after the amendments.

Statement 2: Incorrect. Any establishment which has 50 or more employees shall have the facility of creche. But no such provision of minimum visits.

Statement 3: For women who are expecting after having 2 children, the duration of paid maternity leave shall be 12 weeks. So only the third statement is correct.

10. With reference to the management of minor minerals in India, consider the following statements:

1. Sand is a 'minor mineral' according to the prevailing law in the country.
2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Central Government.

3. State Governments have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: D

Explanation:

Statement 1: Correct. Sand is a minor mineral, as defined under section 3(e) of the Mines and Minerals

(Development and Regulation) Act, 1957 (MMDR Act).

Statement 2: Correct. Section 15 of the MMDR Act empowers state governments to make rules for regulating the grant of mineral concessions in respect of minor minerals and for purposes connected therewith. The regulation of grant of mineral concessions for minor minerals is, therefore, within the legislative and administrative domain of the state governments.

Statement 3: Correct. As per Section 15 of the Mines and Minerals (Development and Regulation) (MMDR) Act, 1957, State Governments have been empowered to frame rules in respect of minor minerals for regulating the grant of quarry leases, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith. Both as a consequence of this, and the fact that the States have been granted powers to frame rules regarding illegal mining in terms of Section 23C of MDMR Act, 1957, this is a subject which is entirely under the legislative and administrative jurisdiction of the States.

Source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=155423>

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=113010>