

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

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 pot 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

**Ans. (A)**

*Exp:* Statement 1 is correct. Jagirdars were given land assignments in lieu of judicial and police duties. Zamindars were traditional land owners. Their only duty was revenue mobilization.

Statement 2 is incorrect. Jagirdars did not have hereditary rights over the land.

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.

**Ans. (B)**

*Exp:* Major aim of land reforms was to stop exploitation through abolition of intermediaries and redistribution of land among the landless through ceiling acts passed by states.

3. 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

**Ans. (C)**

*Exp:* The Global Competitiveness Report is a yearly report published by the World Economic Forum. Since 2004, the Global Competitiveness Report ranks countries based on Global Competitiveness Index.

4. 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

**Ans. (A)**

*Exp:* Statement 1 and 2 are correct, while 3 is incorrect. The Act of 1813, ended the trade monopoly of the East India Company. Only for the trade in the tea, the monopoly was continued for 10 more years.

Statement 2 is also correct. As the Act asserted the sovereignty of British Crown.

Statement 3 is incorrect. The revenues of India were controlled by East India Company and not by the British Parliament.

5. 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

**Ans.(C)**

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*Exp:* Both the statements are correct. Swadeshi Movement (1905) was based on the twin pillars of boycotting the British goods and at the same time promoting the Indian made indigenous goods. Thus it contributed to the revival of the indigenous crafts and industries. Likewise in 1906 the National Council of Education was established as the part of Swadeshi Movement. It promoted Indian educational institutes vis-a-vis the British Educational System.

6. 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. V. 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

**Ans. (D)**

*Exp:* All the pairs are correctly matched.

All India Anti Untouchability League was formed by Mahatma Gandhi in 1931-32.

All India Kisan Sabha was formed by Swami Sahajanand Saraswati in 1936 at Lucknow. It was the pan India organisation that championed the cause of peasants.

Self respect movement was started in the Madras province in 1925 by S. Ramanathan. Later on E.V. Kamaswami Naicker became the prominent leader and was popularly called as Perriyar.

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

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

**Ans. (C)**

*Exp:* Sohgaoura is related to the Mauryan Age. It gives the information about the Mauryan king Chandergupta Maurya.

8. 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) Sohgaoura

**Ans. (A)**

*Exp:* Kanganahalli is located in the Gulbarga district in Karnataka. It has inscription that depicts emperor Ashoka with his queen and name "Ranyo Ashoka".

9. 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

**Ans. (D)**

*Exp:* Mahayan Buddhism treats Buddha as god, unlike the case of Hinyan where Buddha is treated as the teacher.

Mahayan Buddhism also believes in the concept of Bodhisattavas, and the concept of transfer of merit. Image worship and rituals were also started with Mahayan Buddhism.

10. 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.

**Ans. (A)**

*Exp:* "Vishti" or forced labour was an oppressive tax during the Guptan age. Guptan monarchs asked peasants and cultivators to work for the state and no wages were entitled to the labourers.

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11. Building 'Kalyaana Mandapas' was a notable feature in the temple construction in the kingdom of
- Chalukya
  - Chandela
  - Rashtrakuta
  - Vijayanagara

**Ans. (D)**

*Exp:* Kalyan Mandap was a notable feature in the temple construction of South India. These mandaps were important features during Vijaynagar Empire. Kalyan Mandapa of Vitthala temple is very popular.

12. Consider the following statements :
- In the revenue administration of Delhi Sultariate, the in-charge of revenue collection was known as 'Amil'.
  - The Iqta system of Sultans of Delhi was an ancient indigenous institution.
  - 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?

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

**Ans. (A)**

*Exp:* 'Amil' during Sultanat period was an officer who was associated with the revenue collection.

The Iqta system of Sultans of Delhi was not indigenous institution. Thus the statement 2 is in correct.

The office of 'Mir Bakshi' came into existence during Mughal age and not during the reign of Khalji Sultans. Thus statement 3 is also in correct.

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

Which of the statements given above is/are correct?

- 1 only

- 2 only
- Both 1 and 2
- Neither 1 nor 2

**Ans. (D)**

*Exp:* Saint Nimbarka belong to 7th century while Kabir belongs to 15th century. Thus they were not contemporary. Statement 1 is incorrect.

Saint Kabir was the disciple of Ramananda. Sheikh Ahmad Sirhindi belongs to 16th century, thus Kabir who belong to 14th century was not influenced by him.

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

- Mahatma Gandhi was instrumental in the abolition of the system of 'indentured labour'.
- In Lord Chelmsford's 'War Conference', Mahatma Gandhi did not support the resolution on recruiting Indians for World War.
- 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?

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

**Ans. (B)**

*Exp:* Mahatma Gandhi was instrumental in the abolition of 'indentured labour'.

Gandhi was in favour of participation of Indian soldier in the first world war. Thus statement 2 is incorrect.

After the salt law was broken and the Civil Disobedience triggered by Gandhi, Indian National Congress was declared as illegal. All the major leaders were put behind bars.

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

**Person Position held**

- Sir Tej Bahadur Sapru: President, All India Liberal Federation
- K. C. Neogy : Member, The Constituent Assembly

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3. 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  
**Ans. (D)**  
*Exp:* All the pairs are correctly matched. Sir Tej Bahadur Sapru was President of All India Liberal Federation.  
KC Neogy was the member of the Constituent Assembly.  
P.C. Joshi was eminent communist leader and he was General Secretary of Communist Party of India.
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 Dhnipads on Hindu gods and goddesses.  
(c) Tansen composed songs on his patrons.  
(d) Tansen invented many Ragas.  
**Ans. (A)**
17. Who among the following Mughal Emperors shifted emphasis from illustrated manuscripts to album and individual portrait?  
(a) Humayun  
(b) Akbar  
(c) Jahangir  
(d) Shah Jahan  
**Ans. (C)**
18. Which one of the following National Parks lies completely in the temperate alpine zone?  
(a) Manas National Park  
(b) Namdapha National Park  
(c) Neora Valley National Park  
(d) Valley of Flowers National Park  
**Ans. (D)**  
*Exp:* Valley of flowers lies in the Western Himalayan Biogeographic Zone. It lies completely in the Temperate Zone. The other three options have some part in sub-tropical belt.
19. Atal Innovation Mission is set up under the  
(a) Department of Science and Technology  
(b) Ministry of Employment Labour and Employment  
(c) NITI Aayog  
(d) Ministry of Skill Development and Entrepreneurship  
**Ans. (C)**  
*Exp:* With a vision to 'Cultivate one Million children in India as Neoteric Innovators', Atal Innovation Mission is establishing Atal Tinkering Laboratories (ATLs) in schools across India. These are being set up under NITI Aayog.
20. On 21<sup>st</sup> June, the Sun  
(a) does not set below the horizon at the Arctic Circle  
(b) does not set below the horizon at Antarctic Circle  
(c) shines vertically overhead at noon on the Equator  
(d) shines vertically overhead at the Tropic of Capricorn  
**Ans. (A)**  
*Exp:* 21<sup>st</sup> June being the Summer Solstice, the Sun lies in the northern Hemisphere over the Tropic of Cancer. As a result, North Pole experiences a perpetual day with no night. The Sun doesn't set below the horizon at the Arctic Circle.
21. 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  
**Ans. (A)**  
*Exp:* Tobacco, Cocoa and Rubber
22. Consider the following statements :  
1. Asiatic lion is naturally found in India only.  
2. Double-humped camel is naturally found in India only.  
3. One-homed rhinoceros is naturally found in India only.  
Which of the statements given above is/are correct?

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

**Ans. (A)**

*Exp:* Asiatic Lions are now found in India only. However, Double humped camel and One horn Rhino are found outside India also.

23. 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

**Ans. (B)**

*Exp:* Chandrabhaga is river Chenab that flows through western Himalayas, while Pandharpur is in Maharashtra. This is a wrong pair and by elimination the other 3 options can be ruled out.

24. In a given year in India, official poverty lines are higher in some States than in 0 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

**Ans. (B)**

*Exp:* Estimation of poverty is done using the same Poverty Line Basket (PLB) in all the states but the monetary value (poverty Line) is different because of different price levels in the states.

25. 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?

- (a) Creating the artificial rains in some regions
- (b) Reducing the frequency and intensity of tropical cyclones
- (c) Reducing the adverse effects of solar wind

on the Earth

- (d) Reducing the global warming

**Ans. (D)**

*Exp:* As a part of techniques under Climate Engineering to counter Global warming the ideas of Cirrus cloud thinning and sulphate aerosol injection in Stratosphere are being contemplated.

26. 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

**Ans. (D)**

*Exp:* 'Pyrolysis and plasma gasification' are the techniques used for solid waste incineration. Pyrolysis is the thermal decomposition of materials at elevated temperatures in an inert atmosphere. The residue of pyrolysis is of extreme interest as they can be the source of secondary raw materials or be used for energy generation in waste treatments.

Plasma gasification is an extreme thermal process using plasma which converts organic matter into a syngas (synthesis gas) which is primarily made up of hydrogen and carbon monoxide. They are a technologies to convert Waste to Energy.

27. Which of the following are in Agasthyamala Biosphere Reserve?

- (a) Neyyar, Peppara and Shendumey Wildlife Sanctuaries; and Kalakad Mundanthurai Tiger Reserve
- (b) Mudumalai, Sathyamangalam and Wayanad Wildlife Sanctuaries; and Silent Valley National Park
- (c) Kaundinya, Gundla Brahme-swaram and Papikonda Wildlife Sanctuaries; and Mukurthi National Park
- (d) Kawal and Sri Venkateswara Wildlife Sanctuaries; and Nagarjunasagar-Srisailem Tiger Reserve

**Ans. (A)**

*Exp:* Agasthyamala Biosphere Reserve is composed of Neyyar, Peppara and Shendurney Wildlife Sanctuaries and their

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### SET- A

adjoining areas of Achencoil, Thenmala, Konni, Punalur, Thiruvananthapuram Divisions and Agasthyavanam Special Division in Kerala. Inclusion of adjoining areas of KalakkadMundanthurai Tiger Reserve in Tamil Nadu has been approved. The reserve now covers parts of Tirunelveli and Kanyakumari Districts in Tamil Nadu and Thiruvananthapuram, Kollam and Pathanamthitta Districts in Kerala.

28. 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

**Ans. (D)**

*Exp:* Adult green turtles are herbivorous, feeding on sea grasses and algae.

Herbivorous fishes are fishes that eat plant material. Surgeonfish and parrotfish often seen browsing and scraping on reef algae.

Dugongs are referred to as “sea cows” because their diet consists mainly of sea-grass. Boa constrictors and green anacondas are two examples of viviparous snakes, meaning they give birth to live young.

29. Consider the following pairs
- | <i>Wildlife</i> :      | <i>Naturally found in</i> |
|------------------------|---------------------------|
| 1. Blue-finned Mahseer | : Cauvery River           |
| 2. Irrawaddy Dolphin   | : Chambal River           |
| 3. 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
- (d) 1, 2 and 3

**Ans. (C)**

*Exp:* Irrawaddy Dolphins are found in Chilkalake and not in Chambal River. By elimination only option (c) will be correct.

30. Why is there a great concern about the ‘microbeads’ that are released into environment?
- (a) They are considered harmful to marine ecosystems.
  - (b) They are considered to cause skin cancer in children.
  - (c) They are small enough to be absorbed by crop plants in irrigated fields.
  - (d) They are often found to be used as food adulterants.

**Ans. (A)**

*Exp:* Microbeads are manufactured solid plastic particles of less than one millimeter in their largest dimension. Microbeads can cause plastic particle water pollution and pose an environmental hazard for aquatic animals in freshwater and ocean water.

When microbeads are washed down the drain, they subsequently pass unfiltered through sewage treatment plants and make their way into rivers and canals, resulting in plastic particle water pollution.

A variety of wildlife, from insect larvae, small fish, amphibians and turtles to birds and larger mammals, mistake microbeads for their food source. This ingestion of plastics introduces the potential for toxicity not only to these animals but to other species higher in the food chain.

31. 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
- (a) anti-malarial drug
  - (b) biodiesel
  - (c) pulp for paper industry
  - (d) textile fibre

**Ans. (D)**

*Exp:* *Girardinia diversifolia*, commonly known as the Himalayan Nettle is a naturally available wild shrub found abundantly in the foothills of Himalayas such as Nepal and Indian States of Uttarakhand, Himachal Pradesh and J&K.

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According to the Centre for Sustainable Fashion, Himalayan Nettle is the longest fiber and is considered finer, stronger, and more elastic than linen. This new trend to use the Nettle fiber for textile purpose has been driven by concern over the environmental damage caused by the processing of synthetic fibers and fabrics.

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

1. Chlorophyll content in the vegetation of a specific location
2. Greenhouse gas emissions from rice paddies of a specific location
3. Land surface temperatures of a specific location

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

**Ans. (D)**

*Exp:* Remote sensing is extremely useful for understanding the spatiotemporal land cover change in relation to the basic physical properties in terms of the surface radiance and emissivity data. Since the 1970s, satellite-derived surface temperature data have been utilized for regional climate analyses on different scale.

Satellite measurements derive atmospheric concentrations of gases using the properties of gases to absorb electromagnetic radiation at specific wavelengths. These instruments primarily use solar radiation that is reflected off the Earth's surface, but some can use radiation emitted by the Earth or from lasers on-board the satellite.

The normalized difference vegetation index (NDVI) is a biophysical parameter that quantifies the photosynthetic activity of vegetation by observing the "greenness" of the vegetation, which is related to the chlorophyll abundance and energy absorption.

33. 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

**Ans. (C)**

*Exp:* Maharashtra (16.47) < Madhya Pradesh (25.11) < Odisha (32.98) < Chhattisgarh (41.09) ... As per ISFR 2017

34. 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

**Ans. (D)**

*Exp:* Global warming may cause the methane hydrates under water or in Polar Regions to get destabilised and disturbed. They can be found in deep sea bed as well as the permafrost land regions in Tundra belt. Methane cycle generally takes 9 to 10 years for Methane to convert into Carbon Dioxide.

35. 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?





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40. 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

**Ans. (C)**

*Exp:* Joining the Ramsar Convention signals a commitment on the part of the national government to work actively to support the “three pillars” of the Convention: 1) ensuring the conservation and wise use of wetlands it has designated as Wetlands of International Importance, 2) including as far as possible the wise use of all wetlands in national environmental planning, and 3) consulting with other Parties about implementation of the Convention, especially in regard to transboundary wetlands, shared water systems, and shared species.

So there is no obligation for all wetlands, but only for those which are designated as Wetlands of International Importance.

41. Consider the following statements :

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

**Ans. (D)**

*Exp:* 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.

Agricultural activities, livestock and poultry farming in particular, are the largest contributors to ammonia (NH<sub>3</sub>) emissions according to the USEPA national emission inventory (USEPA, 2004). Among the livestock and poultry industry sectors, dairy and beef cattle production contributes about 54% of total ammonia emissions to the atmosphere, poultry production 33%, and swine 12%. Ammonia (NH<sub>3</sub>) is generated because of nitrogen in the feces and urine of pigs and cattle and the uric acid of poultry manure.

42. 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

**Ans. (D)**

*Exp:* Aliyar Reservoir is a 6.48 km<sup>2</sup> (2.5 sq mi) reservoir located in Aliyar village near Pollachi town in Coimbatore District, Tamil Nadu, South India. The dam is located in the foothills of Valparai, in the Anaimalai Hills of the Western Ghats.

Isapur Dam is an earthfill dam on Penganga river near Pusad in the state of Maharashtra in India. The Kangsabati Reservoir Project, is a project started in the Indian state of West Bengal in 1956 as part of the Indian Second Five-year Plan to provide water to 3,484.77 km<sup>2</sup> of land in the districts of Paschim Medinipur, Purba Medinipur, Bankura, and Hooghly.

43. 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.

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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

**Ans. (B)**

*Exp:* Compared to conventional CNG, use of H-CNG can reduce emission of carbon monoxide up to 70%, besides enabling up to 5% savings in fuel, tests by the Automotive Research Association of India and Indian Oil Corporation Ltd (IOCL) have found. It doesn't eliminate CO completely.

44. 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.

**Ans. (A)**

*Exp:* Less dew is formed on cloudy nights because radiation during cloudy nights occurs at a very slow pace. The radiation occurs very slowly because the clouds are thick during cloudy nights and trap the heat and water vapor inside the clouds.

45. 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

**Ans. (B)**

*Exp:* No Amendments in the constitution related to keeping election of PM outside judicial review.

46. 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

**Ans. (C)**

*Exp:* According to Judges (inquiry) Act, 1968, the motion to impeach a Judge of the Supreme Court of India can be rejected by the Speaker. Constitution doesn't give details on 'incapacity and proved misbehaviour'.

47. 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

**Ans. (A)**

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*Exp:* 9th Schedule inserted by 1st Amendment Act (1951).

48. 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

**Ans. (D)**

*Exp:* Coal blocks are allocated using bidding methodology, not on lottery basis. In recent years, dependence on imports has reduced because of increased production but India is still importing coking coal with high calorific value for certain industries.

49. 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

**Ans. (A)**

*Exp:* 'Office of Profit' not defined in the Constitution.

50. 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

**Ans. (B)**

51. 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

**Ans. (C)**

*Exp:* There are 75 PVTGs officially notified in the country so far.

52. 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.

**Ans. (B)**

*Exp:* Article 142 is related to enforcement of decrees and orders of Supreme Court and orders as to discovery, etc.

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

53. 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

**Ans. (A)**

*Exp:* According to Article 208 rules of procedure of the state legislature is either determined by State Legislature itself otherwise or follow those in force immediately before the commencement of the Constitution.

54. 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, 3 and 4 only
- (c) 2 and 4 only
- (d) 1, 2, 3 and 4

**Ans. (B)**

*Exp:* Protocol against the smuggling of migrants by land, sea and air, is supplementing the United

Nations convention against transnational organized crime, it is not a part of UNCAC.

Article 14 of UNTOC talks about returning the assets to their rightful owner wherever possible. It says "States Parties shall, to the extent permitted by domestic law and if so requested, give priority consideration to returning the confiscated proceeds of crime or property to the requesting State Party so that it can give compensation to the victims of the crime or return such proceeds of crime or property to their legitimate owners."

55. 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.

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

**Ans. (D)**

56. Which Article of the Constitution of India safeguards one's right to many the person of one's choice?

- (a) Article 19
- (b) Article 21
- (c) Article 25
- (d) Article 29

**Ans. (B)**

*Exp:* Right to marry is related to right to life and personal liberty.

57. Consider the following statements:

1. According to the Indian Patents Act, a biological process to create a seed can be 'patented in India.

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

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

**Ans. (C)**

*Exp:* Section 3(j) of Patent Act 1970, talks about Inventions which are not patentable: 3. What are not inventions.- The following are not invention within the meaning of this Act,- (j) "Plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals are not inventions."

This section was quoted by SC in denying patent for Mansanto.

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. The headquarter of the IPAB is located in Chennai. IPAB also has sittings at Chennai, Delhi, Kolkata and Ahmedabad.

58. 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 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

**Ans. (B)**

59. As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct?

- (a) Waste generator has to segregate waste into five categories.
- (b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
- (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
- (d) It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.

**Ans. (C)**

*Exp:* The Rules are now applicable beyond Municipal areas and extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, airbase, Port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.

Responsibilities of Generators have been introduced to segregate waste in to three streams, Wet (Biodegradable), Dry (Plastic, Paper, metal, wood, etc.) and domestic hazardous wastes (diapers, napkins, empty containers of cleaning agents, mosquito repellents, etc.) and handover segregated wastes to authorized rag-pickers or waste collectors or local bodies.

Special provision for management of solid waste in hilly areas:- Construction of landfill on the hill shall be avoided. A transfer station at a suitable enclosed location shall be setup to collect residual waste from the processing facility and inert waste. Suitable land shall be identified in the plain areas, down the hill, within 25 kilometers for setting up sanitary landfill. The residual waste from the transfer station shall be disposed off at this sanitary landfill.

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

60. 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

**Ans. (A)**

*Exp:* As per the rules

“no workman employed on fixed term employment basis as a result of non-renewal of contract or employment or on the expiry of such contract period without it being renewed, shall be entitled to any notice or pay in lieu thereof, if his services are terminated:

Provided that the services of a temporary workman shall not be terminated as a punishment unless he has been given an opportunity of explaining the charges of misconduct alleged against him in the matter prescribed “

61. 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

**Ans. (B)**

*Exp:* The Lead Bank Scheme was introduced in 1969 under which banks were allocated specific districts for development and coordination of banking activities.

62. 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

**Ans. (A)**

*Exp:* Section 3 (e) of The Mines And Minerals (Development And Regulation) Act (e) “minor minerals” means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral;Section 15 of same Act. Power of State Governments to make rules in respect of minor minerals.—(1) The State Government may, by notification in the Official Gazette, make rules for, regulating the grant of 5 [quarry leases, mining leases or other mineral concessions] in respect of minor minerals and for purposes connected therewith.

63. Consider the following statements :

1. Most of India's external debt is owed by governmental entities.
2. All of India's external debt is denominated 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

**Ans. (D)**

*Exp:* More percent eighty percent of India’s external debt is owned by non-government entities.

About 50 percent of India’s external debt is denominated in US dollars.

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

64. 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  
**Ans. (B)**
65. 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  
**Ans. (B)**  
*Exp:* Risk of currency crisis can be reduced by promoting foreign currency inflows. It is possible through improved IT sector earnings and increased remittances from Indians abroad. Increased government expenditure will not improve foreign exchange inflows.
66. 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)  
**Ans. (C)**
67. 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?  
 (a) Certificate of Deposit  
 (b) Commercial Paper  
 (c) Promissory Note  
 (d) Participatory Note  
**Ans. (D)**  
 Participatory notes are securities issued by FIIs in their home countries based on the holding of assets in the countries where they have invested.
68. 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  
**Ans. (A)**
69. 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  
**Ans. (A)**  
*Exp:* Finance Commission and NITI Aayog have not to do with review of the independent regulators in sectors like telecommunications, insurance, electricity, etc.

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

70. With reference to India's Five-Year Plans, which of the following statements is / are correct?
1. From the Second Five-Year Plan, there was a determined thrust towards substitution of basic and capital good industries.
  2. The Fourth Five-Year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.
  3. 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.
- (a) 1 and 2 only  
(b) 2 only  
(c) 3 only  
(d) 1, 2 and 3
- Ans. (B)**
71. With reference to Asian Infrastructure Investment Bank (AIIB), consider the following statements :
1. AIIB has more than 80 member nations.
  2. India is the largest shareholder in AIIB.
  3. AIIB does not have any members from outside Asia.
- Which of the statements given above is/are correct?
- (a) 1 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
- Ans. (A)**
- Exp:* AIIB has 97 approved members. China is the largest shareholder in AIIB (26.1%). AIIB has members outside Asia like Australia.
72. What was the purpose of Inter-Creditor Agreement signed by Indian banks and financial institutions recently?
- (a) To lessen the Government of India's perennial burden of fiscal deficit and current account deficit
  - (b) To support the infrastructure projects of Central and State Governments
  - (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
- Ans. (D)**
73. 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
- Ans. (A)**
- Exp:* Chairmen of public sector banks are selected (recommended) by Banks Board Bureau but appointed by the Union Ministry of Finance.
74. Consider the following statements :
1. Petroleum and Natural Gas 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
- Ans. (B)**
75. 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.
- 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



# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

**Ans. (D)**

*Exp:* LTE is a mobile Internet technology standard. It's an abbreviation of Long Term Evolution. LTE technology is commonly applied in 4G.

VoLTE is an upgradation of LTE technology, used in 4G as well as 5G, wherein you can simultaneously send voice and data over the network without diminishing quality of voice.

76. 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

**Ans. (C)**

*Exp:* From the Amendment: "Provided that the maximum period entitled to maternity benefit by a woman having two or more than two surviving children shall be twelve weeks of which not more than six weeks shall precede the date of her expected delivery;";

11A. (1) Every establishment having fifty or more employees shall have the facility of crèche within such distance as may be prescribed, either separately or along with common facilities : Provided that the employer shall allow four visits a day to the creche by the woman, which shall also include the interval for rest allowed to her.

77. 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

**Ans. (A)**

*Exp:* Ease of Doing Business has 10 sub-indices which does not include 'maintenance of law and order'.

78. 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

**Ans. (C)**

*Exp:* E-Waste Management Rules, 2016 will bring the producers under Extended Producer Responsibility (EPR), along with targets. The producers have been made responsible for collection of E-waste and for its exchange.

79. 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

**Ans. (C)**

*Exp:* Economic cost includes all the costs incurred by the FCI including procurement incidentals and distribution cost. Charges of godowns are included in it.

80. 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

**Ans. (D)**

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

*Exp:* Social capital is the capital with an entity in the form of relationships, network and trust which may be used in mobilisation of individuals, people or institutions.

81. 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.

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

**Ans. (D)**

*Exp:* High Court has the power to declare even central law invalid. There can be judicial review of Supreme Court over Constitutional Amendment.

82. 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

**Ans. (A)**

*Exp:* In terms of PPP dollars, India is the third largest economy of the world. It is the sixth largest, in terms of nominal exchange rate which is also known as Atlas Method.

83. 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.
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

**Ans. (A)**

*Exp:* Area under the cultivation of jowar is 5.1 million hectares while that of oilseeds is 26.2 million hectares.

Area under sugarcane is stagnant around 5 million hectares.

84. 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

**Ans. (D)**

*Exp:* Vegetable oils (Edible oils) has a share of about 60 percent of total agricultural commodities in terms of value.

85. 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

**Ans. (D)**

*Exp:* Liberty is essentially individual centric concept and development of individual faculty shall be considered as its ultimate level.

86. 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

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

- (b) Encouraging Indian borrowers to issue rupee denominated Masala Bonds
- (c) Easing conditions relating to external commercial borrowing
- (d) Following an expansionary monetary policy

**Ans. (D)**

*Exp:* For stopping slide of Indian rupee, there is need to increase inflow or reduce outflow of foreign currency. Expansionary monetary policy will not help in these objectives.

87. 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

**Ans. (A)**

*Exp:* Statement 2 is not mentioned in the directives. Consolidated system audit report is to e submitted to the RBI and not to the CAG.

88. 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 United States of America

**Ans. (C)**

89. 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) She United Kingdom  
(d) The United States of America

**Ans. (B)**

90. The money multiplier in an economy increases with which one of the following?

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

**Ans. (B)**

*Exp:* Increase in money multiplier happens due to more and more use of banking facility including lending and borrowing activities in the economy. It is directly related to the banking habit of the population.

91. 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.
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

**Ans. (B)**

*Exp:* Augmented reality (AR) adds digital elements to a live view often by using the camera on a smartphone. Virtual reality (VR)

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

implies a complete immersion experience that shuts out the physical world. Using VR devices such as HTC Vive, Oculus Rift or Google Cardboard, users can be transported into a number of real-world and imagined environments such as the middle of a squawking penguin colony or even the back of a dragon.

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

**Ans. (B)**

*Exp:* The Denisovans or Denisovahominins are an extinct species or subspecies of archaic humans in the genus Homo.

93. With reference to the recent developments in science, which one of the following statements is **not** correct?
- Functional chromosomes can be created by joining segments of DNA taken from cells of different species.
  - Pieces of artificial functional DNA can be created in laboratories.
  - A piece of DNA taken out from an animal cell can be made to replicate outside a living cell in a laboratory.
  - Cells taken out from plants and animals can be made to undergo cell division in laboratory petri dishes.

**Ans. (A)**

*Exp:* Artificial gene synthesis, known as DNA printing is a method in synthetic biology that is used to create artificial genes in the laboratory. Replication of ANIMAL CELL DNA can be done through POLYMERASE CHAIN REACTION.

Plant cell can be culture through tissue culture while animal cell can be culture and used in adult stem cell technology.

94. Consider the following statements:  
A digital signature is
- an electronic record that identifies the certifying authority issuing it

- used to serve as a proof of identity of an individual to access information or server on Internet
- 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?

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

**Ans. (B)**

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

- Location identification of a person
- Sleep monitoring of a person
- Assisting the hearing impaired person

Select the correct answer using the code given below.

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

**Ans. (D)**

*Exp:* Wearable technology has a variety of applications which grows as the field itself expands. It appears prominently in consumer electronics with the popularization of the smart watch and activity tracker. Apart from commercial uses, wearable technology is being incorporated into navigation systems, advanced textiles, and healthcare.

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

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

Select the correct answer using the code given below.

- 1, 2 and 4

# UPSC Prelim 2019

## GENERAL STUDIES (PAPER-I)

### SET- A

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

**Ans. (A)**

*Exp:* RNA interference (RNAi) is a biological process in which RNA molecules inhibit gene expression or translation, by neutralizing targeted mRNA molecules.

97. 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'.

**Ans. (B)**

98. 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

**Ans. (B)**

*Exp:* Antimicrobial resistance occurs naturally over time, usually through genetic changes. However, the misuse and overuse of antimicrobials is accelerating this process. In many places, antibiotics are overused and misused in people and animals, and often given without professional oversight. Poor infection control, inadequate sanitary conditions and inappropriate food-handling encourage the spread of antimicrobial resistance.

99. What is Cas9 protein that is often mentioned in news?

- (a) A molecular scissors used in targeted gene editing  
(b) A biosensor used in the accurate detection of pathogens in patients  
(c) A gene that makes plants pest-resistant  
(d) A herbicidal substance synthesized in genetically modified crops

**Ans. (A)**

*Exp:* Cas9 (or "CRISPR-associated protein 9") is an enzyme that uses CRISPR sequences as a guide to recognize and cleave specific strands of DNA that are complementary to the CRISPR sequence. Cas9 enzymes together with CRISPR sequences form the basis of a technology known as CRISPR-Cas9 that can be used to edit genes within organisms. This editing process has a wide variety of applications including basic biological research, development of biotechnology products, and treatment of diseases.

100. Which one of the following statements is not correct?

- (a) Hepatitis B virus is transmitted much like HIV.  
(b) Hepatitis B, unlike Hepatitis C, does not have a vaccine.  
(c) Globally, the number of people infected with Hepatitis B and C viruses are several times more than those infected with HIV.  
(d) Some of those infected with Hepatitis B and C viruses do not show the symptoms for many years.

**Ans. (B)**

*Exp:* The hepatitis B vaccine is a safe and effective vaccine that is recommended for all infants at birth and for children up to 18 years. The hepatitis B vaccine is also recommended for adults living with diabetes and those at high risk for infection due to their jobs, lifestyle, living situations, or country of birth.