

2019

UPSC

CIVIL SERVICES EXAMINATION
(PRELIMS)

PAPER

1



General Instructions

1. This Test Booklet contains **100** items (questions). Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
2. You have to mark all your responses **ONLY** on the separate OMR Sheet provided.
3. All items carry equal marks.
4. **Penalty for wrong answers:**
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third (0.33)** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct, and there will be same penalty as above to that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be no penalty for that question.

1. **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
2. **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 application 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.
3. **The Chairman 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
4. **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
5. **With reference to communications 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

6. 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

7. 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

8. 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

9. 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

10. 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

11. 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

12. 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 Government 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

13. 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

14. 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

15. 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
16. Which one of the following suggested that the Governor should be an imminent 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)
17. Which of the following is issued by registered foreign portfolio investors to overseas investors who want to be part of Indian stock market without registering themselves directly?
- (a) Certificate of Deposits
 - (b) Commercial Paper
 - (c) Promissory Note
 - (d) Participatory Note
18. 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
19. In India, which of the following review the independent regulators in sectors like telecommunications, insurance electricity, etc. ?
1. Ad Hoc Committee set up by the Parliament
 2. Parliamentary Department Related Standing Committee
 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 only (b) 1, 3 and 4 only
(c) 3, 4 and 5 only (d) 2 and 5 only
20. 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
21. 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
22. 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 statement given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
23. With reference to the cultivation of Kharif crops in which 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 is/are correct?

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

24. 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

25. 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

26. 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 nonessential goods and promoting exports
(b) Encouraging Indian borrowers to issue rupee denominated Masala Bonds
(c) Easing conditions relating to external commercial borrowing
(d) Following an expansionary monetary policy

27. 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 store 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

28. 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 its from 25th May, 2018?

- (a) Australia
(b) Canada
(c) The European Union
(d) The United States of America

29. 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

30. 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

31. 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 Konda 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

32. With reference to the Constitution of India, prohibition 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.

33. **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

34. **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 everfirst 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 members 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

35. **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 Forests 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

36. **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

37. **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 in the 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

38. **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

39. **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 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 the part of waste generator that the waste generated in one district cannot be moved to another district.

40. 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

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

42. 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

43. 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.

44. 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 serve 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

45. 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

46. '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 only
(c) 1 and 3 only (d) 1 and 4 only

47. 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'.

48. 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 only (b) 2 and 3 only
(c) 1, 3 and 4 only (d) 2, 3 and 4 only

49. 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

50. 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.

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

1. Jagirdars were holders or 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 or 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

52. 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.

53. 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

54. 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

55. 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

56. 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

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

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

58. 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

59. Consider the following statements:

1. Deification of the Buddha
2. Trading 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

60. 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 region 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.

61. 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

62. 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-horned rhinoceros is naturally found in India only.

Which of the statements given above is/are correct?

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

63. 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

64. 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

65. 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

66. 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

67. 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-Srisailem Tiger Reserve

68. 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

69. Consider the following pairs:

Wildlife		Naturally found in
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
70. 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.
71. Building 'Kalyaana Mandapas' was a notable feature in the temple construction in the kingdom of
- (a) Chalukya (b) Chandela
(c) Rashtrakuta (d) Vijayanagara

72. 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

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

74. 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
75. With reference to Indian National Movement, consider the following pairs:

Person	Position held
1. Sir Tej Bahadur Sapru	President, All India Liberal Federation
2. K. C. Neogy	Member, The Constituent Assembly
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
76. 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 Dhrupada on Hindu gods and goddesses.
(c) Tansen composed songs on his patrons.
(d) Tansen invented many Ragas.

77. 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
78. Which one of the following National Parks lies completely in the temperate alpine?
 (a) Manas National Park
 (b) Namdahpa National Park
 (c) Neora Valley National Park
 (d) Valley of Flowers National Park
79. Atal Innovation Mission is set up under the
 (a) Department of Science and Technology
 (b) Ministry of Labour and Employment
 (c) NITI Aayog
 (d) Ministry of Skill Development and Entrepreneurship
80. On 21st 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
81. 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
82. 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
83. 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
84. 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.
85. 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
86. 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 only (b) 3 only
 (c) 3 and 4 only (d) 1, 3 and 4
87. **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
88. **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 product.
 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
89. **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
90. **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
91. **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
92. **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
93. **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
94. **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
95. **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

96. 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

97. 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

98. Consider the following pairs:

	Glacier	River
1.	Bandarpunch	Yamuna
2.	Bara Shigri	Chenab
3.	Milam	Mandakini
4.	Siachen	Nubra
5.	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

99. In India, the use of carbofuran, methyl parathion, 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) moisturizing agents in cosmetics

100. Consider the following statements:

- 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.
- The Wetlands (Conservation and Management) Rules, 2010 were framed by the Government of India based on the recommendation of Ramsar Convention.
- 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

OMR SHEET

Darken the circle for each question.

Q.No.	Response
1.	(a) (b) (c) (d)
2.	(a) (b) (c) (d)
3.	(a) (b) (c) (d)
4.	(a) (b) (c) (d)
5.	(a) (b) (c) (d)
6.	(a) (b) (c) (d)
7.	(a) (b) (c) (d)
8.	(a) (b) (c) (d)
9.	(a) (b) (c) (d)
10.	(a) (b) (c) (d)
11.	(a) (b) (c) (d)
12.	(a) (b) (c) (d)
13.	(a) (b) (c) (d)
14.	(a) (b) (c) (d)
15.	(a) (b) (c) (d)
16.	(a) (b) (c) (d)
17.	(a) (b) (c) (d)
18.	(a) (b) (c) (d)
19.	(a) (b) (c) (d)
20.	(a) (b) (c) (d)
21.	(a) (b) (c) (d)
22.	(a) (b) (c) (d)
23.	(a) (b) (c) (d)
24.	(a) (b) (c) (d)
25.	(a) (b) (c) (d)

Q.No.	Response
26.	(a) (b) (c) (d)
27.	(a) (b) (c) (d)
28.	(a) (b) (c) (d)
29.	(a) (b) (c) (d)
30.	(a) (b) (c) (d)
31.	(a) (b) (c) (d)
32.	(a) (b) (c) (d)
33.	(a) (b) (c) (d)
34.	(a) (b) (c) (d)
35.	(a) (b) (c) (d)
36.	(a) (b) (c) (d)
37.	(a) (b) (c) (d)
38.	(a) (b) (c) (d)
39.	(a) (b) (c) (d)
40.	(a) (b) (c) (d)
41.	(a) (b) (c) (d)
42.	(a) (b) (c) (d)
43.	(a) (b) (c) (d)
44.	(a) (b) (c) (d)
45.	(a) (b) (c) (d)
46.	(a) (b) (c) (d)
47.	(a) (b) (c) (d)
48.	(a) (b) (c) (d)
49.	(a) (b) (c) (d)
50.	(a) (b) (c) (d)

Q.No.	Response
51.	(a) (b) (c) (d)
52.	(a) (b) (c) (d)
53.	(a) (b) (c) (d)
54.	(a) (b) (c) (d)
55.	(a) (b) (c) (d)
56.	(a) (b) (c) (d)
57.	(a) (b) (c) (d)
58.	(a) (b) (c) (d)
59.	(a) (b) (c) (d)
60.	(a) (b) (c) (d)
61.	(a) (b) (c) (d)
62.	(a) (b) (c) (d)
63.	(a) (b) (c) (d)
64.	(a) (b) (c) (d)
65.	(a) (b) (c) (d)
66.	(a) (b) (c) (d)
67.	(a) (b) (c) (d)
68.	(a) (b) (c) (d)
69.	(a) (b) (c) (d)
70.	(a) (b) (c) (d)
71.	(a) (b) (c) (d)
72.	(a) (b) (c) (d)
73.	(a) (b) (c) (d)
74.	(a) (b) (c) (d)
75.	(a) (b) (c) (d)

Q.No.	Response
76.	(a) (b) (c) (d)
77.	(a) (b) (c) (d)
78.	(a) (b) (c) (d)
79.	(a) (b) (c) (d)
80.	(a) (b) (c) (d)
81.	(a) (b) (c) (d)
82.	(a) (b) (c) (d)
83.	(a) (b) (c) (d)
84.	(a) (b) (c) (d)
85.	(a) (b) (c) (d)
86.	(a) (b) (c) (d)
87.	(a) (b) (c) (d)
88.	(a) (b) (c) (d)
89.	(a) (b) (c) (d)
90.	(a) (b) (c) (d)
91.	(a) (b) (c) (d)
92.	(a) (b) (c) (d)
93.	(a) (b) (c) (d)
94.	(a) (b) (c) (d)
95.	(a) (b) (c) (d)
96.	(a) (b) (c) (d)
97.	(a) (b) (c) (d)
98.	(a) (b) (c) (d)
99.	(a) (b) (c) (d)
100.	(a) (b) (c) (d)

ANSWERS WITH EXPLANATION

1. **Option (a) is correct.**

Explanation: The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank. Its mission is to improve social and economic outcomes in Asia and beyond.

It began its operations in 2016. By the end of 2020, it had 103 approved members. These member countries are representing approximately 79% of the global population and 65% of global GDP.

The AIIB has received AAA ratings since 2017 from the top three credit rating agencies: Standard & Poor's, Moody's and Fitch.

It was granted the Permanent Observer status in both the United Nations General Assembly and the Economic and Social Council in the year 2018.

The bank has approved more loans for India than any other member country.

China is its biggest shareholder in the AIIB, and India is the second-largest.

Recently, it has emphasised on green projects and supporting public health initiatives during the Covid-19 pandemic besides infrastructure.

In 2021, the AIIB approved a USD356.67 million loan to the Indian government. This loan will support the expansion of the Chennai metro rail system.

2. **Option (d) is correct.**

Explanation: A panel led by PNB chairman Sunil Mehta has proposed Project Sashakt. The bank will manage the bad loans of up to Rs. 50 crores at its level within 90 days.

The banks will enter an Inter-Creditor Agreement for the bad loans of Rs. 50-500 crore, authorizing the lead bank to implement a resolution plan within 180 days, or the asset can be referred to the National Company Law Tribunal (NCLT).

3. **Option (a) is correct.**

Explanation: The Banks Board Bureau recommends for selection of heads - Public Sector Banks and Financial Institutions. It also helps banks in developing strategies and capital raising plans.

The Committee to Review Governance of Boards of Banks in India in May 2014 gave its recommendations for the establishment of the Banks Board Bureau (BBB).

The chairman of the committee was P.J. Nayak.

The government of India approved the constitution of the Banks Board Bureau as an autonomous recommendatory body of eminent professionals and officials to make recommendations for the appointment of the heads of Public Sector Banks (PSBs) and state-owned financial institutions.

The Ministry of Finance takes the final decision on the appointments in consultation with the Prime Minister's Office.

It is a public authority as defined in the Right to Information Act, 2005.

4. **Option (b) is correct.**

Explanation: The Petroleum and Natural Gas Regulatory Board Act, 2006, provide for the establishment of Petroleum and Natural Gas Regulatory Board to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to promote competitive markets and for matters connected in addition to that or incidental to it.

Section 110 of the Electricity Act, 2003 (Central Act 36 of 2003), an Appellate Tribunal for the purposes of Petroleum and Natural Gas Regulatory Board Act, 2006, having jurisdiction throughout India has been set up to hear appeals.

5. **Option (d) is correct.**

Explanation: VoLTE is an update version of technology to the LTE protocol. It is used by mobile phone networks.

LTE only allows transmission of data while voice calls are routed to their older 2G or 3G networks. It means under the LTE protocol one cannot access 4G data services while on a call, and it leads to poor voice quality or slow internet. VoLTE allows voice calls to be 'packaged' and carried through LTE networks. It allows 4G data accessibility even during calls. LTE is commonly marketed as 4G LTE.

6. Option (c) is correct.

Explanation: Maternity Benefit (Amendment) Act, 2017

- It provides for complete paid absence from work for 26 weeks (earlier 12 weeks) to take care of the child.
- The Act applies to all establishments employing ten or more women.
- For women having more than two children, the duration of paid maternity leave shall be 12 weeks.
- A 12-week maternity leave is available to mothers adopting a child under the age of three months from the date of adoption, as well as to the commissioning mothers.
- The Act makes it mandatory for employers to educate women about the maternity benefits available to them at the time of their appointment.
- Any establishment which has 50 or more employees shall have the facility of creche.

The provision under Section 11A directs that the employer shall allow four creche visits daily by the woman employees.

7. Option (a) is correct.

Explanation: Doing Business measures regulations affects 11 areas of the life of a business. Ten of these are included in this Doing Business 2019 ranking on the Ease of Doing Business. These areas are: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. The eleventh area is the labor market regulation, which was not included in the 2019 ranking.

8. Option (c) is correct.

Explanation: The Extended producer's responsibility (EPR) is a policy approach. It provides a significant responsibility to producers, financial and/or physical, for the treatment or disposal of post-consumer products.

Assigning such responsibility provide incentives to prevent wastes at the source, promote product design for the environment and support the achievement of public recycling and materials management goals.

The responsibility was given to the producer of electrical and electronic equipment to manage such equipment after its 'end of life'. It means the producer is responsible for their products once the consumer discards them.

9. Option (c) is correct.

Explanation: The economic cost of food grains to the Food Corporation of India comprises the Minimum Support Price and bonus (if any) plus procurement price of food grains, costs related to procurement such as statutory taxes, labour costs, mandi fees, and so on and costs of distribution, including freight, storage and administration.

10. Option (d) is correct.

Explanation: Social capital is a sociological concept that refers to the intangible relational assets that emerge from social interactions. These assets are generated through giving and taking and activating the "norm of reciprocity," creating social obligations that connect and bind people and groups. The more social capital is used, the greater the benefits. The concept of social capital is composed of three distinct but interrelated structural, emotional and behavioral components. They are networks, trust and collaborative cultural norms, respectively.

The Extended producer's responsibility (EPR) is a policy approach. It provides a significant responsibility to producers, financial and/or physical, the social resources can be divided into three forms of capital:

- economic capital in the form of material assets and income;
- cultural capital such as educational qualifications and status; and
- social capital in the form of networks of contacts and social associations (Bourdieu 1986).

11. Option (b) is correct.

Explanation: The Service Area Approach (SAA) was introduced in April 1989. It was introduced to bring about an orderly and

planned development of rural and semi-urban areas of the country.

The service area approach is an alternative and the improved method of Lead Bank Scheme for the deployment of bank credit for rural development. Each bank branch under the SAA in the rural and semi-urban area was designated to serve an area of 15 to 25 villages. The concerned branch was responsible for meeting the needs of bank credit of its service area.

12. Option (a) is correct.

Explanation: Sand is defined as a minor mineral under section 3(e) of the Mines and Minerals (Development and Regulation) Act, 1957.

As per Section 15 of the MMDR Act, the State Governments have the right to frame rules in respect of minor minerals.

The state governments can regulate the grant of quarry leases, mining leases or other mineral concessions in respect of minor minerals.

Section 23C of the MMDR Act gives power to the state governments to frame rules to prevent illegal mining, transportation and storage of minor minerals.

13. Option (d) is correct.

Explanation: As per the Government report on external debt by December 2018, the largest share of external debt was of the commercial borrowings with a share of 37.1%, followed by NRI deposits (23.9%) and short-term trade credit (19.9%).

The largest component of India's external debt was in US dollars denominated with a share of 45.9% at end of December 2018, followed by the Indian rupee (24.8%), SDR (5.1%), yen (4.9%) and euro (3.1%).

14. Option (b) is correct.

Explanation: A bank segregates its funds in assets to earn profits. The assets of a bank include investments, loans and advances, money at call and short notice bills discounted and purchased. It also includes the cash in hand with the banks and the cash held with the RBI.

The liabilities include deposits both time and demand and borrowings.

15. Option (b) is correct.

Explanation: A currency crisis is a decline in the value of a country's currency. It negatively affects an economy by creating instabilities in exchange rates. This instability in the exchange rate means that one unit of a certain currency no longer buys as much as it used to in another currency.

A good amount of foreign exchange reserve can help against any risks of currency crisis.

The foreign currency earnings of India's IT sector and remittances from abroad would reduce the risk of currency crisis and more inflow of foreign currencies in the economy and boost the foreign exchange reserves.

Increasing the government expenditure is not related to the change in foreign exchange reserves or any currency fluctuations.

16. Option (c) is correct.

Explanation: Sarkaria Commission Report (1988)- Recommendation on the appointment of Governor:

- The Governor should be an eminent person but not from the state where he/she is to be posted.
- State chief minister should have a say in the appointment of the Governor.
- The Governor should be a detached or neutral figure.

He/she should not have intense political links and also not have taken part in politics in the recent past.

- Governor should not be a member of the ruling party.

17. Option (d) is correct.

Explanation: A Participatory Note (PN or P-Note) is a derivative instrument issued in foreign jurisdictions, by a SEBI, registered Foreign Institutional Investor (FII) or its sub-accounts or one of its associates, against underlying Indian securities.

A promissory note contains a written promise by one party to pay another party a definite sum of money, either on demand or at a specified future date.

Commercial Paper (CP) is an unsecured money market instrument (short-term) issued in the form of a promissory note.

Certificate of Deposits, issued by commercial banks and financial institutions in the form of a promissory note, is a saving certificate with a fixed maturity date at the fixed interest rate.

18. Option (a) is correct.

Explanation: As per law, the Compensatory Afforestation Fund Management and Planning Authority exists at both the National and State levels.

It doesn't provide for mandatory people's participation in the compensatory afforestation programmes carried out under the Compensatory Afforestation Fund Act, 2016.

19. Option (a) is correct.

Explanation: Parliamentary Department related Standing Committees: There are 24 Department Related Standing Committees in India. These committees comprise members from both Houses of Parliament. These are ministry specific committees and may review the working of regulators within their respective departments.

The Ad Hoc committees are temporary and task-specific. These Committees perform a specific task and dissolve once their task is done. These are also Ministries' specific and review the working of regulators within their respective departments. The Joint Parliamentary Committee (JPC) on the allocation of 2G spectrum and the JPC on the stock market scam are some examples of ad-hoc committees.

The two parliamentary committees on finance which exercise oversight of regulators are:

- (a) the Committee on Estimates; and
- (b) the Public Accounts Committee (PAC).

The Finance Commission, the Financial Sector Legislative Reforms Commission and the NITI Aayog have no role in reviewing the independent regulators.

20. Option (a) is correct.

Explanation: India adopted the strategy of Import Substitution Industrialization (ISI) in the fifties. The main objective was to build a self-reliant economy.

From the 2nd Five-Year Plan, there was a determined thrust towards substitution of

basic and capital goods industries. The ISI strategy was based on the PC Mahalanobis model of growth.

The 4th Five-year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.

The financial sector become an integral part of the 9th five-year plan.

21. Option (d) is correct.

Explanation: The 42nd Constitutional Amendment Act, 1976:

Article 228A inserted the special provisions in the constitution of India that no High Court shall have the jurisdiction to declare any Central law to be constitutionally invalid.

Later, the 43rd Amendment Act of 1977 restored the original position.

The Supreme Court laid down a new doctrine of the 'basic structure' ('basic features') of the Constitution in the Kesavananda Bharati case (1973).

The Supreme Court ruled that the Parliament under Article 368 can amend the constitution, but the amendment should not alter the 'basic structure' of the Constitution. If the amendment alters the basic structure, then it is cut down by the highest judiciary, including the Constitutional amendment.

22. Option (a) is correct.

Explanation: The Purchasing Power Parity (PPP) exchange rate is a rate at which the currency of one country is calculated by comparing the currency of another country to buy the same amount of goods and services. For example-If price of a burger in India is Rs100 and in New York for \$2, it means the PPP exchange rate of 1 dollar to Rs 50.

China is the world's largest economy on the PPP basis in 2018 followed by the United States at second and India on third.

23. Option (a) is correct.

Explanation: The area under rice cultivation in India in 2015-16 was 43.39 million hectares and is the highest amongst all.

The annual area under Jowar ranges between 17 and 18 million hectares while the oilseed area is 26.1 million hectares (2015-16).

The area under sugarcane cultivation has not steadily decreased because it was 4.99 million hectares (2013-14), 5.066 million hectares (2014-15), 4.953 million hectares (2015-16).

The area under cotton cultivation is 11.87 million hectares (2015-16) while the area under sugarcane cultivation is 4.953 million hectares (2015-16). Hence, the area under cotton cultivation is more than sugar cultivation.

24. Option (d) is correct.

Explanation: Vegetable oils account for the highest import in terms of value in the last five years.

India imports 70 percent of its edible oil consumption.

The spices account for the least imports in terms of value in the last five years while pulses were the second most imported commodity and fresh fruits placed at third among the following agricultural commodities imported by India.

25. Option (d) is correct.

Explanation: The term 'liberty' means the absence of restraints on the activities of individuals. It also means, providing opportunities for the development of individual personalities.

The term is very essential for the successful functioning of the Indian democratic system. The meaning of liberty is not 'license' to do what one likes. It has to be enjoyed within the limitations. In brief, the liberty conceived by the Preamble or fundamental rights is not absolute but qualified. Hence, liberty is to provide the opportunity to develop oneself fully.

26. Option (d) is correct.

Explanation: When the RBI uses its tools to stimulate the economy, then it is known as the expansionary monetary policy. It increases the money supply, lowers interest rates, and increases aggregate demand. Lower interest rates will also tend to reduce the value of the currency. If domestic interest rates fall then it becomes less attractive to save money in domestic banks. It leads to outflow of foreign currency and, therefore, slide of the Indian Rupee.

27. Option (a) is correct.

Explanation: The Reserve Banks directive related to the Storage of Payment System Data provides some commands to the payment systems providers that:

- (i) The entire data relating to payment systems operated by them are stored in a system only in India with full end-to-end transaction details. For the foreign leg of the transaction, if any, the data can also be stored in the foreign country, if required.
- (ii) They shall ensure compliance of (i) above within a period of six months.
- (iii) They shall submit the System Audit Report (SAR) on completion of the requirement at (i) above to the Reserve Bank.

28. Option (c) is correct.

Explanation: The General Data Protection Regulation (GDPR) aims to protect all European Union (EU) citizens from data breaches. The regulation, which was approved by the EU Parliament in April 2016, came into effect on May 25, 2018.

29. Option (b) is correct.

Explanation: The Action Plan for Prioritization and Implementation of Co-operation Areas in the Nuclear Field identified jointly by India and Russia and was signed on 5th October, 2018 in New Delhi.

30. Option (b) is correct.

Explanation: Money Multiplier is the ratio of the stock of money to the stock of high powered money. It basically represents the relationship between the monetary base and the money supply of an economy. It explains the increase in the amount of cash in circulation generated by the banks' ability to lend money out of their depositors' funds. Therefore, it is a concept or an economic tool where an initial deposit can lead to a bigger final increase in the total money supply. For example, if the commercial banks gain deposits of Rs 1 Lakh and this leads to a final money supply of Rs 10 lakh then, the money multiplier is 10. Therefore, increase in banking habit of the population would lead to increase in Money Multiplier.

31. Option (c) is correct.

Explanation: The Ministry of Home Affairs have categorized 75 tribal groups as Particularly Vulnerable Tribal Groups (PVTGs). These tribal groups resides in 18 states and the Andaman and Nicobar Islands.

PVTGs are centrally recognized special category from among the Scheduled Tribe. PVTGs were constituted on the basis of the report of the Dhebar commission (1960-61) during the 4th five-year plan. Such groups were identified by one or more of the following features:

1. Existence of pre-agricultural practices,
2. Practice of hunting and gathering,
3. Zero or negative population growth and
4. Low level of literacy as compared to other tribal groups.

Konda Reddy of Khammam district of Telangana and Irular of Tamil Nadu are in the list of PVTGs.

32. Option (b) is correct.

Explanation: Article 142 states that the Supreme Court in the exercise of its jurisdiction may pass such a decree or make such order as is necessary for doing complete justice in any cause or matter pending before it, but it will be enforceable in such manner as may be prescribed by Parliament.

It would be enforced in such a manner as the President may by order prescribe until a provision in that behalf is made.

One of the important instances of application of Article 142 by the Supreme Court was in the Union Carbide case — relating to the victims of the Bhopal gas tragedy.

The Supreme Court said that to do complete justice, it could even override the laws made by Parliament by holding that, "prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142."

Hence, the Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.

33. Option (c) is correct.

Explanation: Article 176 (1) of the Indian constitution states 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. The Governor should inform the Legislature of the causes of its summons.

A House of the Legislature of a State may make rules for regulating subject to the provisions of this Constitution, its procedure and the conduct of its business. However if there are no rules by the state executive and no law made by state legislature we use law made by parliament Article 208(1).

34. Option (c) is correct.

Explanation: The United Nations Convention against Corruption (UNCAC) is the first-ever binding global anti-corruption instrument. It come into force in December 2005.

It obliges the States to prevent and criminalise different corrupt practices, promote international cooperation, cooperate for the recovery of stolen assets and enhance technical assistance and information exchange.

The UNTOC was adopted by General Assembly in 2000, and it came into force in 2003. The Convention is the first comprehensive and global legally binding instrument to fight transnational organized crime, including:

- (i) the criminalising of the participation in an organized criminal group, of money laundering, related corruption and obstruction of justice and
- (ii) the adoption of frameworks for extradition, mutual legal assistance and international cooperation.

It further supplemented by three Protocols:

- (1) The Protocol to Prevent, Suppress and Punish Trafficking in Persons.
- (2) The Protocol against the Smuggling of Migrants by Land, Sea and Air.
- (3) The Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components.

The United Nations Office on Drugs and Crime (UNODC) is mandated

by its Member States to assist in the implementation of both Conventions.

35. **Option (b) is correct.**

Explanation: The Indian Forest (Amendment) Ordinance, 2017 exempts bamboo grown in non-forest areas from the definition of tree, thereby dispensing with the requirement of the felling/transit permit for its economic use.

Minor Forest Produce (MFP) is defined under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, as all non-timber forest produce of plant origin, and includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, wax, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.

The Forest Rights Act 2006 defines forest rights as inclusive of 'Right of ownership, allows ownership of minor forest produce to forest dwellers.

36. **Option (b) is correct.**

Explanation: The Supreme Court of India in a judgement of a case said, "the right to marry a person of one's choice is integral to Article 21 (right to life and liberty) of the Constitution".

The Supreme Court set aside an order of the Kerala High Court of 2017 which annulled or cancelled the marriage of Kerala Muslim convert girl Hadiya and Shefin Jahan.

37. **Option (c) is correct.**

Explanation: As per the Patents Act, 1970 "plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals" are inventions which are not patentable.

The Intellectual Property Appellate Board is a quasi-judicial body and was constituted in September 1958. The Board is entrusted with the task of adjudication of disputes pertaining to copyright registration, assignment of copyright, grant of licenses in respect of works withheld from public, unpublished Indian works, production and publication of translations and works for certain specified purposes. It also hears cases in other miscellaneous matters under the Copyright Act, 1957.

38. **Option (b) is correct.**

Explanation: The Government of India is empowered to make rules to lay down the standards for emission or discharge of environmental pollutants from various sources under Section 3 of the Environmental Protection Act.

39. **Option (c) is correct.**

Explanation: The Solid Waste Management Rules of 2016 provide for detailed criteria for setting-up solid waste processing and treatment facility, solid waste management in hilly areas, for waste to energy process, for Sanitary Landfills, for site selection, development of facilities at the sanitary landfills, specifications for land filling operations and closure on completion of landfilling, pollution prevention, Closure and Rehabilitation of Old Dumps etc.

40. **Option (c) is correct.**

Explanation: The government has notified fixed-term employment for all sectors through an amendment to the Industrial Employment (Standing Orders) Central Rules, 1946. Fixed-term employment for all sectors will make it easier for companies to hire-and-fire workers along with reducing the role of middlemen.

No notice of termination of employment shall be necessary in the case of the temporary workman.

41. **Option (b) is correct.**

Explanation: The Virtual Reality technology provides a completely virtual environment to its users that is generated by a computer.

A VR headset is used to experience virtual reality. Most of the VR headsets are connected to a computer (Oculus Rift) or a gaming console (Play Station), but there are standalone devices like the Google Cardboard which is popular as well.

Most standalone VR headsets work in combination with smartphones – you insert a smartphone, wear a headset, and immerse in the virtual reality.

In augmented reality, users see and interact with the real world while digital content is added to it. Pokemon Go is an example of it.

42. Option (b) is correct.

Explanation: *Denisovans* or *Denisova* was an early human species.

It was first discovered in 2008 in a cave in the Altai mountains in Siberia. Analysis of a *Denisovans* fossil recovered from *Baishiya Karst* cave in Xiahe, Gansu, China shows that they lived in the Tibetan Plateau some 1,60,000 years ago. This is the first time when the presence of '*Denisovan*' has been found outside the *Denisova cave*.

43. Option (a) is correct.

Explanation: DNA is an organic chemical molecule made from atoms of carbon, hydrogen, nitrogen, oxygen, and phosphorus. DNA can be synthesized in test tubes using the tools of organic chemistry. DNA sequences can be made by simply adding together the A's T's C's and G's -- the "bases" that make the rungs of the *twisted DNA ladder*.

Functional chromosomes can not be created by joining segments of DNA taken from cells of different species.

44. Option (c) is correct.

Explanation: Digital Signature:

It is an electronic signature which ensures the authentic of an electronic document.

A digital signature is not a record rather it provides authentication of the record.

A digital certificate is an electronic record which identifies the certifying authority issuing it. So statement 1 is incorrect.

Also certificates serve as a proof of identity of an individual for a certain purpose. So statement 2 is also incorrect.

Digital signature is an electronic method of signing an electronic document and ensuring that the original content is unchanged. Thus, statement 3 is correct

45. Option (d) is correct.

Explanation: Wearable technology is a category of electronic devices which are hands-free with practical uses, powered by microprocessors with the ability to send and receive data via the internet and can be worn as accessories.

- Location-and position-tracking sensors (i.e., GPS, altimeter, magnetometer,

compasses, and accelerometers) are the most common type of sensors on wearable devices, such as activity trackers, smartwatches, and even medical wearables where they are used to check the physical activity and health of patients.

- Fitness trackers, also known as activity trackers, are typically worn on the wrist, chest, or ears, and are designed to monitor and track outdoor sport activities.
- In more recent times, there has been a new surge in wearable technology worn on the ear, referred to as hearables.

46. Option (a) is correct.

Explanation: *RNAi* is a gene silencing technology that inhibits protein synthesis in target cells using *double-stranded RNA*.

- *RNAi* has huge significance within the Indian context, considering the deep-seated resistance over the years to *Bt cotton* and other genetically modified seeds. RNA-reliant solutions could be a viable alternative.
- *RNAi* is used in functional genomics (systematic analysis of loss-of-function phenotypes induced by *RNAi* triggers) and developing therapies for the treatment of viral infection, dominant disorders, neurological disorders, and many types of cancers (in vivo inactivation of gene products linked to human disease progression and pathology).

47. Option (b) is correct.

Explanation: The LIGO detectors discovered the first gravitational waves produced by two giant merging blackholes in 2016.

48. Option (b) is correct.

Explanation: In 2014, India was the highest consumer of antibiotics, followed by China and the United States. In India, antibiotic FDCs are heavily prescribed even without the knowledge of a proven advantage over single compounds. Injudicious use of antibiotic FDCs could lead to emergence of bacterial strains resistant to multiple antibiotics.

The use of antibiotics in food animals can transmit antibiotic-resistant bacteria between

humans and animals through contact, in food products, and from the environment.

49. **Option (a) is correct.**

Explanation:

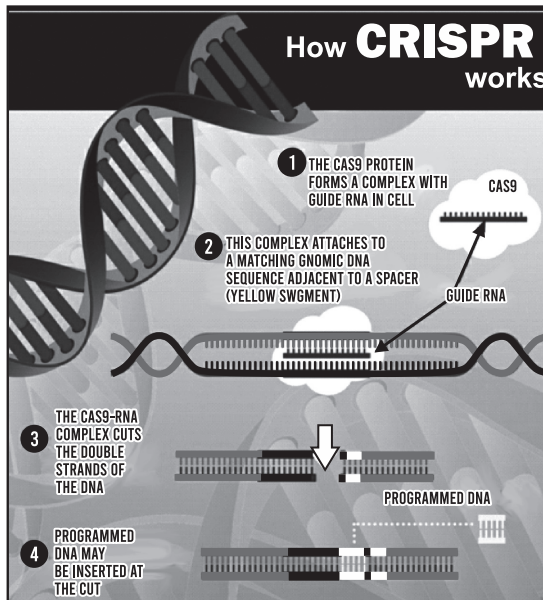


Figure: CRISPR-Cas9

CRISPR-Cas9 is a system used by bacterial cells to recognise and destroy viral DNA as a form of adaptive immunity.

Its components can be used by researchers to remove, add or alter specific DNA sequences in the genome of higher organisms.

The gene editing tool has two components: a *single-guideRNA* (*sgRNA*) that contains a sequence that can bind to DNA, and the *Cas9* enzyme which acts as a molecular scissor that can cleave DNA.

50. **Option (b) is correct.**

Explanation: Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease. The Hepatitis B virus and HIV are transmitted through contact with the blood or other body fluids of an infected person.

- The hepatitis B vaccine is the mainstay of hepatitis B prevention.
- Hepatitis B is a global public health threat. It is up to 100 times more infectious than the HIV/AIDS virus.

51. **Option (d) is correct.**

Explanation: Jagirdars in Mughal India under the Mansabdari system were assigned land in

lieu of police, judicial, military duties assigned towards the empire.

Zamindars apart from revenue collecting duties had to do military duties and perform *Khidmat*.

The Sultan was the fountain pen of the judiciary system in the Mughal period. Jagirdars were those who were given the salary in lieu of military service in terms of jagirs (land).

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. Zamindars had hereditary rights over revenue.

The zamindars held the most significant position in the agrarian structure of Mughal India.

52. **Option (b) is correct.**

Explanation: The Land reform constitutes the most important measures to improve the economic condition of agricultural tenants. The Land reforms program in post-Independence India has evolved through different phases and includes the Abolition of Intermediaries, Tenancy reforms, consolidation of holdings and determination of holdings per family, imposition of ceilings with fewer exemptions, and to distribute surplus land among landless people.

- The unit of application of ceiling differs from State to State on the basis of a 'land holder' and a 'family'.
- Moreover, there was a list of exemptions to ceiling limits by different states.
- The Government was to increase food grains production by switching over from cash crops to food crops; intensification of cropping over already cultivated land; and increasing cultivated area by bringing cultivable and fallow land under plough.
- Therefore, Land reforms did not lead to cash crops being predominant form of cultivation.
- The Land Reforms in India aimed at the redistribution of ownership holdings

and reorganising operational holdings for optimum utilisation of land.

53. **Option (c) is correct.**

Explanation: The Global Competitiveness Report (GCR) is a yearly report published by the World Economic Forum. The World Economic Forum (WEF) is a Swiss nonprofit foundation established in 1971, based in Geneva, Switzerland.

It is committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas.

Some major reports published by WEF are:

- Energy Transition Index.
- Global Competitiveness Report.
- Global IT Report (WEF along with INSEAD, and Cornell University publishes this report)
- Global Gender Gap Report.
- Global Risk Report.
- Global Travel and Tourism Report.

54. **Option (a) is correct.**

Explanation: The Charter Act of 1813 ended the trade monopoly of the East India company in India. It allowed the East India Company to trade in tea and trade with China only. The same act also asserted the sovereignty of the British Crown over the Indian territories held by the company.

- The company was allowed to continue territorial possession for 20 years, i.e., from 1833 to 1853, without prejudice to the sovereignty of the Crown.
- The Charter Act of 1813 required the Company to maintain its territorial and commercial accounts separately.

55. **Option (c) is correct.**

Explanation: The Swadeshi Movement had its genesis in opposition to the partition of Bengal in 1905 and emphasised on self-reliance. It contributed to the revival of indigenous artisans craft and industries.

One of the major planks of the programme of self-reliance was Swadeshi or national education. In August 1906, the National Council of Education was established.

The Council defined its objectives, 'to organize a system of Education Literary; Scientific and Technical — on national lines and under national control from the primary to the university level.

The most important aspect of the movement was a focus on self-reliance or Atma-shakti which led to the development of indigenous industries.

56. **Option (d) is correct.**

Explanation: Mahatma Gandhi set up All India Anti-Untouchability league in 1932 which later transformed into Harijan Sevak Sangh.

- Gandhi started publishing a weekly journal called "Harijan" on 11 February 1933 from Yerwada Jail during British rule.
- All India Kisan Congress Sabha, 1936 was founded in Lucknow in April 1936 with Swami Sahjanand Saraswati as the President and N. G. Ranga as the general secretary.
- E.V. Ramaswami Naicker organized the "Self Respect Movement", designed as Dravidian uplift and anti-caste movement.

57. **Option (c) is correct.**

Explanation: Sohgaura is located in the Gorakhpur district of Uttar Pradesh. A copper plate inscription of Ashoka was found here in Brahmi script. Whereas, Chanhudaro, Kot Diji, Desalpur are Harappan sites.

58. **Option (a) is correct.**

Explanation: Kanaganahalli is a site with an inscription in Brahmi script reading Ranyo Ashoka and a sculpture of King Ashoka which is about 3 km from Sannati, Karnataka.

Here, the excavation found mentions 'Ranyo Ashoka' (King Ashoka) mentioned along with the stone portrait of Ashoka.

59. **Option (d) is correct.**

Explanation: The term Mahayana is a Sanskrit word which literally means "Great Vehicle".

It believes in the heavenliness of Buddha and idol worship of Buddha and Bodhisattvas embodying Buddha Nature.

It originated in northern India and Kashmir and then spread east into Central Asia, East Asia and some areas of Southeast Asia.

Buddhist schools embedded in China, Korea, Tibet and Japan belong to the Mahayana tradition.

The emergence of Bodhisattva is central to the Mahayana sect of Buddhism, which emerged during the fourth council of Buddhism held in the 1st century A.D. In Kashmir during the reign of Kanishka. Bodhisattvas were perceived as deeply compassionate beings who accumulated merit through their efforts but used this not to attain Nibbana and thereby abandon the world but to help others. Thus, Mahayana Buddhism promoted devotional support, deification of Buddha, icon worship and rituals and treading the path of Bodhisattvas.

60. Option (a) is correct.

Explanation: Forced labour (vishti) became more common than before in 300-600C. It is mentioned along with taxes in land grant inscriptions. It means that it was considered a source of income for the state, a sort of tax paid by the people.

61. Option (a) is correct.

Explanation: The New World means the Americas (especially the continental landmass of North and South America) and the Old World consists of Africa, Europe, and as the New World was discovered by European Powers such as Spain, Portuguese and French. Tobacco, Cocoa and Rubber were the native crops of the New World and were introduced in the Old World (Asia).

After the voyages of Christopher Columbus in 1492, the Columbian exchange brought New World crops such as maize, potatoes, sweet potatoes, and manioc to Europe, and Old World crops such as wheat, barley, rice, and turnips, and livestock, including horses, cattle, sheep, and goats to the Americas.

62. Option (a) is correct.

Explanation:

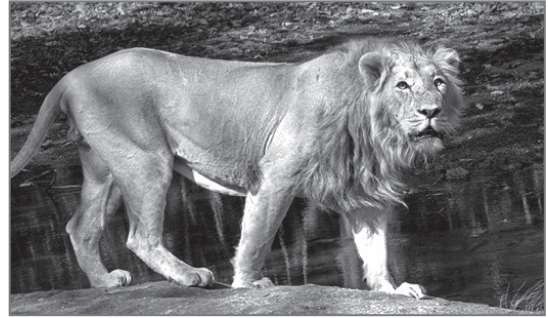


Figure: Asiatic lion

The Asiatic lion is naturally found in India only. Once, it was ranged from Persia (Iran) to Palamau in Eastern India, now almost driven to extinction by indiscriminate hunting and habitat loss.

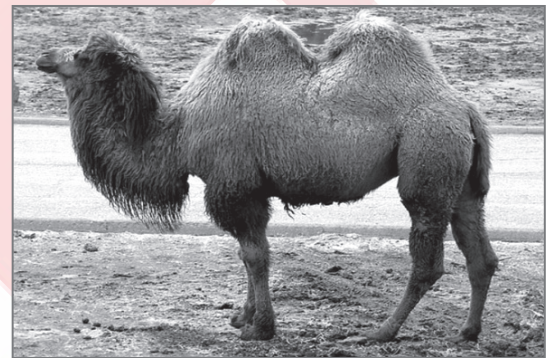


Figure: The Bactrian camel or Double-humped camel

The Bactrian camel or Double-humped camel is a native to the steppes of Central Asia (Gobi desert). In India, it is found in the Nubra valley. It is found on a vast expanse of cold-desert areas across Mongolia, China, Kazakhstan, Turkmenistan, Uzbekistan and parts of Afghanistan.



Figure: One-horned rhino

One-horned rhino is naturally found in areas of Assam such as Kaziranga National Park, India and also in Chitwan National Park (CNP) of Nepal.

63. **Option (a) is correct.**

Explanation: Pandharpur is a well-known pilgrimage town on the banks of the Chandrabhaga river in Solapur district, Maharashtra, India.

- Tiruchirapalli District is located along the Kaveri River in Tamil Nadu, India.
- Hampi is a UNESCO World Heritage Site in India. It is located near Hospet town in the Karnataka state on the bank of the Tungabhadra river.

64. **Option (b) is correct.**

Explanation: The Planning Commission methodology for estimating poverty at the national and state level was regarded by some as inappropriate in giving a representative picture of the incidence of poverty in the country. The main points of the criticism were:

- (a) the adjustment procedure;
- (b) the choice of deflators to represent price changes in the poverty line;
- (c) application of the same poverty line in all the states, which implies the absence of price differentials across the states;
- (d) use of a fixed consumption basket over time; and
- (e) the uniform consumption basket for all the states.

65. **Option (d) is correct.**

Explanation: The geo-engineering technique, known as stratospheric aerosol injection (SAI), could limit rising temperatures that are causing climate change. To thin out the coverage of cirrus clouds and alter their radiative effects over the earth, the cloud thinning strategy would be used to shoot powder over cirrus clouds.

66. **Option (d) is correct.**

Explanation: While developing The Three-Year Action Agenda (2017-18 to 2019-20), the NITI Aayog drawn a broader framework for addressing the issue of municipal solid waste (MSW). The solution suggested by the Action Agenda was twin-fold: waste-to-energy incinerators for bigger municipalities

and composting method of waste disposal for small towns and semi-urban areas.

Pyrolysis: Pyrolysis is the process of heating organic material at high temperatures in the absence of oxygen.

Plasma Gasification: 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.

67. **Option (a) is correct.**

Explanation: The Agasthyamalai Biosphere Reserve is located in the Western Ghats in the south of the country and consisting mostly of tropical forest. It is also a unique genetic reservoir of cultivated plants, in particular cardamom, jamune, nutmeg, pepper and plantain. Shendurney, Peppara and Neyyar Wildlife Sanctuaries; and the Kalakad Mundanthurai Tiger Reserve are located in the site.

68. **Option (d) is correct.**

Explanation: Green sea turtles eat seagrass and algae, though juveniles snack on crabs, sponges, and jellyfish. Once mature, it is the only sea turtle that is strictly herbivorous.

Parrotfish are algae eaters. The herbivores fish include the Japanese angelfish, yellow blotch rabbitfish, and tilapia.

Snakes that are *viviparous* nourish their developing young through a placenta and yolk sac, something that is highly unusual among reptiles. Boa constrictors and green anacondas are two examples of *viviparous* snakes, meaning they give birth to live young with no eggs involved at any stage of development.

69. **Option (c) is correct.**

Explanation:



Figure: Blue-finned Mahseer



Figure: Irrawaddy dolphin

The Western Ghats region is famous for freshwater biodiversity.

- The Blue-finned Mahseer is found naturally in the Cauvery river. This fish belongs to the genus *Tor*.
- The Irrawaddy dolphin is a critically endangered species, and it is found in Lake Chilika near sea coasts and in estuaries and rivers in parts of the Bay of Bengal and Southeast Asia. The Gangetic dolphin is found in the Chambal river.



Figure: Rusty spotted cat

Forests of the Eastern Ghats are home to some endangered and lesser-known *mammal* species like the Fishing Cat, Rusty Spotted Cat, Indian Pangolin, etc.

- The Rusty Spotted Cat is one of the world's smallest *feline* inhabit the forests of Andhra Pradesh, in the Eastern Ghats.

70. **Option (a) is correct.**

Explanation: *Microbeads* are tiny, solid, manufactured plastic particles that are less than 5mm and don't degrade or dissolve in water. They can be made of polyethylene, polypropylene and polystyrene. They are extensively used in personal care products such as shampoo, baby lotion and face cream and

are toxic to marine life and aquatic ecosystem. They are being banned internationally.

71. **Option (d) is correct.**

Explanation:



Figure: Kalyan Mandapa

The pavilions or mandapas that were meant to celebrate the marriages of dieties were known as Kalyan Mandapa.

A great example of it is in the Vitthala Temple of Hampi. A kalyana mandapa was meant to celebrate divine weddings in the Vijayanagara Empire.

72. **Option (a) is correct.**

Explanation: The in-charge of revenue collection in the Delhi Sultanate was known as 'Amil'.

- The initial Turkish conquests in India, in the early, thirteenth century displaced many local chiefs. In order to consolidate, the Turkish rulers made revenue assignments (*iqta*), in lieu of cash, to their nobles. So, *Iqtas* were provinces or spheres of influence which were put under the charge of officers called 'Iqtadars' (governors). It was used in the Caliphate administration as a way of financing operations and paying civil and military officers. It was not an ancient indigenous institution.

- In Akbar's administration, the military department was headed by Mir Bakshi, which looked after all matters pertaining to the military administration.

73. **Option (d) is correct.**

Explanation: Nimbarka was a 13th-century philosophical saint, whereas Akbar's time period was (1556-1605).

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Nimbarka, a Telugu Brahmin, is believed to have been a younger contemporary of Ramanuja (11th-century). He believed in total devotion to Krishna and Rama.

Naqshbandi Sufi Saint Shaikh Ahmad Sirhindi was in Haryana in the period of 1624. Whereas Kabir Das is a 15th-century mystical poet and a great Bhakti Saint of India. He is the most important Nirguna Bhakti saint. The nirguna bhaktas were devotees of a formless God even while calling him variously as Rama, Govinda, Hari or Raghunatha.

74. Option (b) is correct.

Explanation: Mahatma Gandhi organised a non-violent protest in South Africa in opposition to compulsory registration of the Indian population under the Asiatic Law Amendment Act of the Transvaal government which led to passing of Indian Relief Act 1914. The act eliminated extra tax on Indian citizens who had not renewed their indentures and recognised the validity of Indian marriages.

Mahatma Gandhi supported the British Cause in World War I according to the promise made in the War Conference of Delhi.

The Indian National Congress was declared illegal by the British government after the launch of the second phase of Civil Disobedience Movement.

75. Option (d) is correct.

Explanation:

- Tej Bahadur Sapru was the president of the All India Liberal federation. The moderate leaders formed the "Indian National Liberal Federation" in 1919. The party (INLF) was founded by Surendra Nath Benerjee. Some of its prominent leaders were Tej Bahadur Sapru, V. S. Srinivasa Sastri and M. R. Jayakar.
- KC Neogy was an Indian politician from West Bengal. He was a member of the Constituent Assembly of India, the member of the first Cabinet of independent India and the chairman of the first Finance Commission of India.
- Puran Chand Joshi, 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.

76. Option (a) is correct.

Explanation: Tansen was the most important musician during the reign of Akbar who composed many ragas. Tansen was from Senia Gharana and was one of the best-known dhrupad singers who composed songs on his patrons. Tansen was the title given by Raja Vikramjit of Gwalior. He was a court musician in the darbar of Raja Ramachandra of Bandavagarh (Rewa).

Akbar gave him the title of 'Mian'.

Tansen's earliest guru was Swami Haridas.

77. Option (c) is correct.

Explanation: The Mughal School of painting originated in the reign of Akbar in 1560 A. D. During his reign, an illustrated manuscript of the Tuti-nama appears to be the first work of the Mughal School. The style of painting in this manuscript shows the Mughal style in its formative stage.

It was during Jahangir's reign that manuscripts became less important and individual portraits became more prominent.

Under Jahangir, painting acquired greater charm, refinement and dignity. He had great fascination for nature and took delight in the portraits of birds, animals and flowers.

78. Option (d) is correct.

Explanation: The Valley of Flowers National Park is located in the Chamoli district of Uttarakhand. It is known for its meadows of endemic alpine flowers and the variety of flora.

The valley has three alpine regions, sub-alpine between 3,200m and 3,500m which is the limit for trees, lower alpine between 3,500m and 3,700m, and higher alpine above 3,700m.

The valley is situated at the confluence point of the Himalayan ranges, Zaskar and Western and Eastern Himalayas.

79. Option (c) is correct.

Explanation: The NITI Aayog has set up a flagship initiative that is the Atal Innovation Mission (AIM) in 2016 to promote innovation and entrepreneurship across the length and breadth of the country.

Its objectives are to create and promote an ecosystem of innovation and entrepreneurship

across the country at school, university, research institutions, MSME and industry levels.

NITI Aayog: The Planning Commission was replaced by a new institution – NITI Aayog on January 1, 2015 with emphasis on 'Bottom-Up' approach to envisage the vision of Maximum Governance and 'Cooperative Federalism'.

Chairperson: Prime Minister

Vice-Chairperson: To be appointed by the Prime-Minister

Governing Council: Chief Ministers of all states and Lt. Governors of Union Territories.

Regional Council: To address specific regional issues, comprising Chief Ministers and Lt. Governors Chaired by the Prime Minister or his nominee.

80. **Option (a) is correct.**

Explanation:

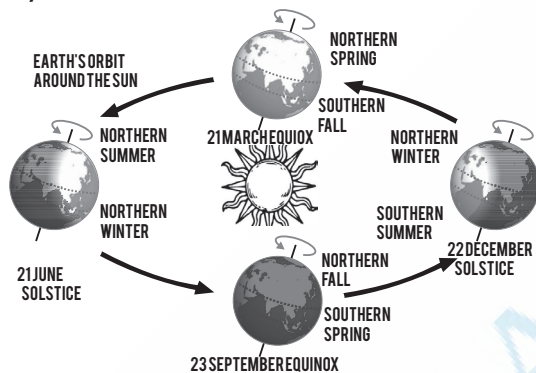


Figure: Summer Solstice

The 21st June is the longest day of the year to the north of the equator, including India, also known as 'Summer Solstice'.

On 21st June, the Sun is directly perpendicular to the Tropic of Cancer and makes an angle of 47° to the Arctic Circle. As such, the Sun is above the horizon for all areas north of Arctic Circle. The entire area in the Arctic circle experiences day. The Arctic Circle experience continuous daylight for about six months. It is summer in the regions to the north of the equator. The longest day and the shortest night at these places occur on 21st June.

At this time in the Southern Hemisphere all these conditions are reversed.

81. **Option (d) is correct.**

Explanation: Agricultural soils contributed to over 70% of N₂O emissions from India in 2010,

followed by waste water (12%) and residential and commercial activities (6%).

Synthetic fertilizer is the major direct source of nitrous oxide from agricultural soils.

Cattle account for 80% of the ammonia production and India is globally the biggest source of ammonia emission.

Ammonia is a common by-product of animal waste due to the often inefficient conversion of feed nitrogen into animal product.

The poultry industry recorded an excretion of reactive nitrogen compounds of 0.415 tonnes in 2016 with an annual growth rate of 6%.

Reactive nitrogen includes –ammonia, nitrate, nitric oxide (NO), nitrous oxide (N₂O). Livestock and Poultry are both responsible for emissions of these.

82. **Option (d) is correct.**

Explanation:

- Aliyar is a village located near Pollachi Town in Coimbatore district in Tamil Nadu, India. The famous Aliyar Reservoir is located in this village.
- Isapur Dam is an earth-fill dam on the Penganga river near Pusad in the state of Maharashtra.
- The Kangsabati Reservoir Project was started in 1956 as part of the Indian Second Five-year Plan to provide water to 3,484.77 square kilometres (1,345.48 sq mi) of land is located in the districts of Midnapur (erstwhile), Bankura, and Hooghly. It involves irrigation land using water from the Kangsabati River, as well as the Shilabati and the Bhoiobbanki rivers.

83. **Option (b) is correct.**

Explanation: Hydrogen-Enriched CNG (H-CNG) is a blend of hydrogen and CNG, the ideal hydrogen concentration being 18%. Compared to conventional CNG, use of H-CNG can reduce emission of carbon monoxide up to 70% and 15% reduction in total hydro carbon emissions, besides enabling up to 5% savings in fuel. For consumers who pay Rs 42 per kg for CNG, the cost of H-CNG would not be more than Rs 43 per kg.

84. Option (b) is correct.

Explanation: Dew is a type of precipitation where water droplets form on the ground, or an object near ground is a process called as condensation of moisture. through a process called condensation of moisture form on the ground or on objects near the ground. The favorable weather elements for dew include clear skies, light wind, decent soil moisture, and low night-time dew point depressions.

Dew forms first at the ground level because long-wave emission causes the earth's surface to cool at night, but the clouds prevent this from happening as it reflects the earth's radiation.

Warm and moist soils will help with the formation of dew as the soil cools overnight.

Dew is not formed:

- (a) on cloudy nights because cloudy nights are warmer than clear nights.
- (b) in shady places because air cannot move there freely.
- (c) on windy nights because wind carries away the moist air.

85. Option (b) is correct.

Explanation: The Thirty-ninth Constitutional Amendment Act of 1975 removed the authority of the Supreme Court to adjudicate petitions regarding elections of the President, Vice President, Prime Minister and Speaker of the Lok Sabha. It proposed a body constituted by the Parliament would be vested with the power to resolve such election disputes.

The Forty-fourth Amendment Act, 1978 omitted the provisions made under the Thirty-ninth Constitutional Amendment Act which removed the authority of the Supreme Court to adjudicate petitions regarding elections of the President, Vice President, Prime Minister and Speaker of the Lok Sabha.

- The 99th Amendment Act of 2015 amended article 124 and changed the system of appointments of judges from the collegium system and constituted the National Judicial Appointments Commission (NJAC).

The Supreme Court struck down the 99th amendment as it impinges upon the principles

of "independence of the judiciary", as well as the "separation of powers".

86. Option (c) is correct.

Explanation: A judge may be removed from his/her office through a motion adopted by the Parliament on the grounds of 'proven misbehaviour or incapacity'. The word 'impeachment' is nowhere mentioned in the Constitution of India, but it is colloquially used to refer to the proceedings under Article 124 and Article 218 for the removal of a judge of the Supreme Court and the High Court, respectively.

- The procedure relating to the removal of a judge of the Supreme Court by the process of impeachment is regulated by the Judges Enquiry Act (1968).

Impeachment procedure:

- A removal motion signed by 100 members (in the case of Lok Sabha) or 50 members (in the case of Rajya Sabha) is to be given to the Speaker/Chairman.
- The Speaker/Chairman may admit the motion or refuse to admit it.
- If it is admitted, then the Speaker/Chairman is to constitute a three-member committee to investigate into the charges.
- The committee should consist of the chief justice or a judge of the Supreme Court, chief justice of a High Court, and a distinguished jurist.
- If the committee finds the judge to be guilty of misbehaviour or suffering from an incapacity, the House can take up the consideration of the motion.
- After the motion is passed by each House of Parliament by a special majority, an address is presented to the president for removal of the judge. Finally, the president passes an order removing the judge.

87. Option (a) is correct.

Explanation: To ensure that agrarian reform, the legislature amended the Constitution in the year 1951 which inserted the Ninth Schedule during the tenure of the Prime Minister Pt. Jawahar Lal Nehru.

88. Option (a) is correct.

Explanation: The Coal sector was nationalised in two phases under the Indira Gandhi Government in 1972, the first with the coking coal mines in 1971-72 and then with the non-coking coal mines in 1973.

After the Supreme Court cancelled the coal block allocations in 2014.

- To manage and reallocate the cancelled blocks in a transparent and accountable manner, the Coal Mines (Special Provisions) Act, 2015 was enacted. Enabling provisions were made in the same Act for 'allocation of coal mines by way of auction and allotment for the sale of coal.
- India holds the 5th biggest coal reserves in the world, but due to incapacity of coal production it imports coals to meet the shortages of domestic supply.

89. Option (a) is correct.

Explanation: The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification. These posts are:

- (i) Ministers of State and Deputy Ministers,
- (ii) Parliamentary Secretaries and Parliamentary Under Secretaries,
- (iii) Deputy Chief Whips in Parliament,
- (iv) Vice-Chancellors of Universities,
- (v) Officers in the National Cadet Corps, and the Territorial Army, and
- (vi) the Chairman and members of Advisory Committees set up by the Government when they are not entitled to any fee or remuneration other than compensatory etc.

The act has been amended 5 times - 1960, 1992, 1993, 2006 and 2013.

The term 'office of profit' has not been defined in the Constitution or in the Representation of the People Act, 1951, but it has been mentioned in the Articles 102 and 191 of the Constitution.

90. Option (b) is correct.

Explanation: The autonomy of the tribal areas in matters of governance has been given in the constitution under the Fifth and Sixth Schedules. In *Samatha v. State of Andhra*

Pradesh & Ors (1997) judgment. the Supreme Court declared that the transfer of tribal land to private parties for mining was null and void under the Fifth Schedule. The Recognition of Forest Rights Act, 2006 protects the individual and community rights of tribal people in forest areas and their right to free and prior informed consent in the event of their displacement and resettlement.

91. Option (d) is correct.

Explanation:



Figure: Girardinia diversifolia (Himalayan nettle)

Girardinia diversifolia (Himalayan nettle), a fibre-yielding plant, has become an important livelihood option for people living in the remote mountainous villages of the Himalayas. The Government of India has granted approval for a project titled Development of products from Himalayan Indian nettle to the Department of Jute and Fibre Technology, Institute of Jute Technology, and the University of Kolkata.

92. Option (d) is correct.

Explanation:

- With the development of remote sensing from space, satellite data offers the possibility for measuring land surface temperature over the entire globe with sufficiently high temporal resolution and with complete spatially averaged rather than point values.
- The Normalized Difference Vegetation Index (NDVI) and the satellite imagery is being used to monitor the global food supply. Healthy vegetation in agriculture is being detected by near-infrared radiation. Healthy vegetation reflects green light and absorbs red and blue

light. The green light that our eyes see is chlorophyll created by plants during photosynthesis.

- Remote sensing from satellites can deliver information on GHG soil emissions by estimating tropospheric, near-surface CO₂ and CH₄ concentrations based on the measurement of the intensity of the reflected sunlight in small wavelength bands in the visible and short-wavelength IR portion of the spectrum.

93. **Option (c) is correct.**

Explanation: The percentage of forested area of state in 2017 as published by the Forest Survey of India in ascending order is:

- Maharashtra (16.47%), Madhya Pradesh (25.11%), Odisha (32.98%) and Chhattisgarh (41.09%).

94. **Option (d) is correct.**

Explanation: Methane hydrate is a crystalline solid that consists of a methane molecule surrounded by a cage of interlocking water molecules. Methane hydrate is an "ice". The global warming might trigger the release of methane gas from these deposits.

Methane hydrates tend to form along the lower margins of continental slopes, where the seabed drops from the relatively shallow shelf, usually about 150 metres below the sea surface. Large deposits of it are found in the Arctic Tundra and under the seafloor.

Methane is relatively short-lived in the atmosphere; a molecule of methane is oxidized to water and carbon dioxide after a decade or so.

95. **Option (d) is correct.**

Explanation: The burning of crop or biomass residues emits traces of carbon monoxide, methane, carbon dioxide, sulphur dioxide, nitrous oxide and tiny particulates which affect human health.

Punjab and Haryana contribute to 48% of the total emission due to paddy burning across India.

Crop residues or biomass burning is a cheap and easiest method to dispose of the leftover crop residues (wheat, rice, sugarcane etc.) after harvesting, for land clearing and pest

control. Burning of crop residues is a common approach to eliminate waste after harvesting all over the world.

96. **Option (b) is correct.**

Explanation: The Adriatic Sea is a water body separating the Italian Peninsula from the Balkan peninsula. The coastal countries of the Adriatic sea are Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro and Slovenia.

- The Black Sea is a large inland sea situated in Europe and bordered by Ukraine to the north, Russia to the northeast, Georgia to the east, Turkey to the south, Bulgaria and Romania to the west.
- The Caspian Sea is the world's largest inland body of water. It is surrounded by Kazakhstan to the northeast, Russia to the northwest, Azerbaijan to the west, Iran to the south, and Turkmenistan to the southeast.
- The Mediterranean Sea stretches from the Atlantic Ocean on the west to Asia on the east. It separates Europe from Africa. It is surrounded in clockwise order by Spain, France, Monaco, Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania, Greece, Turkey, Syria, Lebanon, Israel, Egypt, Libya, Tunisia, Algeria, and Morocco.
- The Red Sea is a narrow strip of water extending southeastward from Suez, Egypt to the Bab-el-Mandeb Strait. It connects with the Gulf of Aden and thence with the Arabian Sea.
- It is surrounded by Saudi Arabia, Yemen, Egypt, Sudan, Eritrea and Djibouti.

97. **Option (b) is correct.**

Explanation: India has been the world's top rice exporter since the last five years.

- India's share in world exports of rice in recent years (2017-18) has stayed at (25-26) % Thailand's has fluctuated between (22 - 25) %, and Vietnam's between (13 - 16)%.

98. Option (a) is correct.

Explanation:



This map is not to scale and is for reference only.

Figure: Major glaciers

- Bandarpunch is located at the western edge of the High Himalayan Range and lies within the Govind Pashu Vihar National Park and Sanctuary. It is a major watershed for the headwaters of the Yamuna River, whose source lies above Yamnotri, on the west end of the massif below White Peak.
- Bara-Sigri is the second longest glacier in Himalaya after Gangotri, is located in the Chandra Valley of Lahaul. The glacier feeds the Chenab River.
- Milam Glacier is a major glacier of the Kumaon Himalaya. The Mandakini is a tributary of the Alaknanda River which originates from the Chorabari Glacier near Kedarnath in Uttarakhand, India.
- Siachen Glacier is located in the eastern Karakoram range in the Himalayas, and its melting water is the main source of the Nubra River in Ladakh.
- Zemu Glacier is the largest glacier in the Eastern Himalaya. It is located at the base of Kangchenjunga in the Himalayan region of Sikkim, India. The Manas River is a transboundary river in the Himalayan foothills between southern Bhutan and India.

99. Option (a) is correct.

Explanation: Carbofuran, phorate, methyl parathion, monocrotophos, methyl demethon, prophenophos and triazophos chemicals are used as pesticides in agriculture. To promote organic farming in Kerala, the state agriculture department had ordered a ban on the use of pesticide. Kerala Agriculture University was asked to provide alternatives to the banned pesticides. The university suggested less hazardous pesticides, like acephate, carbaryl, dimethoate and flubendiamide.

100. Option (c) is correct.

Explanation: Article 4 of the Ramsar Convention states that "Each Contracting Party shall promote the conservation of wetlands, but it is not mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.

The wetlands (conservation and management) rule 2010, which was notified by Ministry of Environment and Forest, enures better conservation and management to prevent the degradation of existing wetlands in India. It was not framed on the basis of recommendation of Ramsar Convention.

As per Wetlands (Conservation and Management) Rules, 2010, a "wetland" means an area or of marsh, fen, peatland or water; natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six metres and includes all inland waters such as lakes, reservoir, tanks, backwaters, lagoon, creeks, estuaries and manmade wetland and the zone of direct influence on wetlands that is to say the drainage area or catchment region of the wetlands as determined by the authority but does not include main river channels, paddy fields and the coastal wetland.