

2018

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 OMR 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. Consider the following statements:

1. In the first Lok Sabha, the single largest party in the opposition was the Swatantra Party.
2. In the Lok Sabha, a "Leader of the Opposition" was recognised for the first time in 1969.
3. In the Lok Sabha, if a party does not have a minimum of 75 members, its leader cannot be recognised as the Leader of the Opposition.

Which of the statements given above is/are correct?

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

2. Which of the following leaf modifications occur(s) in the desert areas to inhibit water loss?

1. Hard and waxy leaves
2. Tiny leaves
3. Thorns instead of leaves

Select the correct answer using the code given below:

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

3. As per the NSSO 70<sup>th</sup> Round "Situation Assessment Survey of Agricultural Households", consider the following statements:

1. Rajasthan has the highest percentage share of agricultural households among its rural households.
2. Out of the total agricultural households in the country, a little over 60 percent belong to OBCs.
3. In Kerala, a little over 60 percent of agricultural households reported to have received maximum income from sources other than agricultural activities.

Which of the statements given above is/are correct?

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

4. How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)?

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.

2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

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

5. Consider the following statements:

1. The Parliament of India can place a particular law in the Ninth Schedule of the Constitution of India.
2. The validity of a law placed in the Ninth Schedule cannot be examined by any court and no judgement can be made on it.

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

6. Which one of the following best describes the term "Merchant Discount Rate" sometimes seen in news?

- (a) The incentive given by a bank to a merchant for accepting payments through debit cards pertaining to that bank.
- (b) The amount paid back by banks to their customers when they use debit cards for financial transactions for purchasing goods or services.
- (c) The charge to a merchant by a bank for accepting payments from his customers through the bank's debit cards.
- (d) The incentive given by the Government to merchants for promoting digital payments by their customers through Point of Sale (PoS) machines and debit cards.

7. What is/are the consequence/consequences of a country becoming the member of the 'Nuclear Suppliers Group'?

1. It will have access to the latest and most efficient nuclear technologies.
2. It automatically becomes a member of "The Treaty on the Non-Proliferation of Nuclear Weapons (NPT)".

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

8. With reference to India's decision to levy an equalization tax of 6% on online advertisement services offered by non-resident entities, which of the following statements is/are correct?

1. It is introduced as a part of the Income Tax Act.
2. Non-resident entities that offer advertisement services in India can claim a tax credit in their home country under the "Double Taxation Avoidance Agreements".

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

9. Consider the following statements:

1. The Fiscal Responsibility and Budget Management (FRBM) Review Committee Report has recommended a debt to GDP ratio of 60% for the general (combined) government by 2023, comprising 40% for the Central Government and 20% for the State Governments.
2. The Central Government has domestic liabilities of 21% of GDP as compared to that of 49% of GDP of the State Governments.
3. As per the Constitution of India, it is mandatory for a State to take the Central Government's consent for raising any loan if the former owes any outstanding liabilities to the latter.

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

10. Consider the following statements:

1. The quantity of imported edible oils is more than the domestic production of edible oils in the last five years.
2. The Government does not impose any customs duty on all the imported edible oils as a special case.

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

11. He wrote biographies of Mazzini, Garibaldi, Shivaji and Shrikrishna; stayed in America for some time; and was also elected to the Central Assembly. He was

- (a) Aurobindo Ghosh

- (b) Bipin Chandra Pal
- (c) Lala Lajpat Rai
- (d) Motilal Nehru

12. Consider the following statements:

1. Aadhaar card can be used as a proof of citizenship or domicile.
2. Once issued, Aadhaar number cannot be deactivated or omitted by the Issuing Authority.

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

13. Which of the following has/have shrunk immensely/dried up the recent past due to human activities?

1. Aral Sea
2. Black Sea
3. Lake Baikal

Select the correct answer using the code given below:

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

14. "Rule of Law Index" is released by which of the following?

- (a) Amnesty International
- (b) International Court of Justice
- (c) The Office of UN Commissioner for Human Rights
- (d) World Justice Report

15. Which one of the following links all the ATMs in India

- (a) Indian Banks' Association
- (b) National Securities Depository Limited
- (c) National Payments Corporation of India
- (d) Reserve Bank of India

16. Consider the following statements:

1. Capital Adequacy Ratio (CAR) is the amount that banks have to maintain in the form of their own funds to offset any loss that banks incur if the account-holders fail to repay dues.
2. CAR is decided by each individual bank.

Which of the statements given above is/are correct?

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

17. The identity platform 'Aadhaar' provides open "Application Programming Interfaces (APIs)". What does it imply?

1. It can be integrated into any electronic device.

2. Online authentication using iris is possible.

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

18. Very recently, in which of the following countries have lakhs of people either suffered from severe famine/acute malnutrition or died due to starvation caused by war/ethnic conflicts?

- (a) Angola and Zambia
- (b) Morocco and Tunisia
- (c) Venezuela and Colombia
- (d) Yemen and South Sudan

19. Regarding Wood's Dispatch, which of the following statements are true?

1. Grants-in-Aid system was introduced.
2. Establishment of universities was recommended.
3. English as a medium of instruction at all levels of education was recommended.

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

20. With reference to the Parliament of India, which of the following Parliamentary Committees scrutinizes and reports to the House whether the powers to make regulations, rules, sub-rules, by-laws, etc. conferred by the Constitution or delegated by the Parliament are being properly exercised by the Executive within the scope of such delegation?

- (a) Committee on Government Assurances
- (b) Committee on Subordinate Legislation
- (c) Rules Committee
- (d) Business Advisory Committee

21. Consider the following statements:

1. As per the Right to Education (RTE) Act, to be eligible for appointment as a teacher in a State, a person would be required to possess the minimum qualification laid down by the concerned State Council of Teacher Education.
2. As per the RTE Act, for teaching primary classes, a candidate is required to pass a Teacher Eligibility Test conducted in accordance with the National Council of Teacher Education guidelines.
3. In India, more than 90% of teacher education institutions are directly under the State Governments.

Which of the statements given above is/are correct?

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

22. Consider the following pairs:

	Tradition	State
1.	ChapcharKut festival	Mizoram
2.	KhongjomParba ballad	Manipur
3.	Thang-Ta dance	Sikkim

Which of the pairs given above is/are correct?

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

23. Consider the following statements:

- The Food Safety and Standards Act, 2006 replaced the Prevention of Food Adulteration Act, 1954.
- The Food Safety and Standards Authority of India (FSSAI) is under the charge of Director General of Health Services in the Union Ministry of Health and Family Welfare.

Which of the statements given above is/are correct?

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

24. The term "two-state solution" is sometimes mentioned in the news in the context of the affairs of

- (a) China                      (b) Israel  
(c) Iraq                      (d) Yemen

25. With reference to the provisions made under the National Food Security Act, 2013, consider the following statements:

- The families coming under the category of 'below poverty line (BPL)' only are eligible to receive subsidised food grains.
- The eldest woman in a household, of age 18 years or above, shall be the head of the household for the purpose of issuance of a ration card.
- Pregnant women and lactating mothers are entitled to a 'take-home ration' of 1600 calories per day during pregnancy and for six months thereafter.

Which of the statements given above is/are correct?

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

26. India enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999 in order to comply with the obligations to

- (a) ILO                      (b) IMF  
(c) UNCTAD                      (d) WTO

27. Consider the following statements:

- In India, State Governments do not have the power to auction non-coal mines.
- Andhra Pradesh and Jharkhand do not have gold mines.
- Rajasthan has iron ore mines.

Which of the statements given above is/are correct?

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

28. With reference to digital payments, consider the following statements:

- BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.
- While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.

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

29. Among the following cities, which one lies on a longitude closest to that of Delhi?

- (a) Bengaluru  
(b) Hyderabad  
(c) Nagpur  
(d) Pune

30. International Labour Organization's Convention 138 and 182 are related to

- (a) Child labour  
(b) Adaptation of agricultural practices to global climate change  
(c) Regulation of food prices and food security  
(d) Gender parity at the workplace

31. Regarding Money Bill, which of the following statements is *not* correct?

- (a) A bill shall be deemed to be a Money Bill if it contains only provisions relating to imposition, abolition, remission, alteration or regulation of any tax.  
(b) A Money Bill has provisions for the custody of the Consolidated Fund of India or the Contingency Fund of India.  
(c) A Money Bill is concerned with the appropriation of moneys out of the Contingency Fund of India.  
(d) A Money Bill deals with the regulation of borrowing of money or giving of any guarantee by the Government of India.



32. With reference to the election of the President of India, consider the following statements:

1. The value of the vote of each MLA varies from State to State.
2. The value of the vote of MPs of the Lok Sabha is more than the value of the vote of MPs of the Rajya Sabha.

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

33. In the Indian context, what is the implication of ratifying the 'Additional Protocol' with the 'International Atomic Energy Agency (IAEA)'?

- (a) The civilian nuclear reactors come under IAEA safeguards.
- (b) The military nuclear installations come under the inspection of IAEA.
- (c) The country will have the privilege to buy uranium from the Nuclear Suppliers Group (NSG).
- (d) The country automatically becomes a member of the NSG.

34. Consider the following countries:

1. Australia                      2. Canada
3. China                              4. India
5. Japan                              6. USA

Which of the above are among the 'free-trade partners' of ASEAN?

- (a) 1, 2, 4 and 5            (b) 3, 4, 5 and 6  
(c) 1, 3, 4 and 5            (d) 2, 3, 4 and 6

35. With reference to the 'Global Alliance for Climate-Smart Agriculture (GACSA)', which of the following statements is/are correct?

1. GACSA is an outcome of the Climate Summit held in Paris in 2015.
2. Membership of GACSA does not create any binding obligations.
3. India was instrumental in the creation of GACSA.

Select the correct answer using the code given below:

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

36. Which of the following is/are the aim/aims of "Digital India" Plan of the Government of India?

1. Formation of India's own Internet companies like China did.

2. Establish a policy framework to encourage overseas multinational corporations that collect Big Data to build their large data centres within our national geographical boundaries.
3. Connect many of our villages to the Internet and bring Wi-Fi to many of our schools, public places and major tourist centres.

Select the correct answer using the code given below:

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

37. Consider the following pairs:

	Towns sometimes mentioned in news	Country
1.	Aleppo	Syria
2.	Kirkuk	Yemen
3.	Mosul	Palestine
4.	Mazar-i-sharif	Afghanistan

Which of the pairs given above are correctly matched?

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

38. In the Federation established by the Government of India Act of 1935, residuary powers were given to the

- (a) Federal Legislature
- (b) Governor General
- (c) Provincial Legislature
- (d) Provincial Governors

39. Consider the following statements:

1. The Speaker of the Legislative Assembly shall vacate his/her office if he/she ceases to be a member of the Assembly.
2. Whenever the Legislative Assembly is dissolved, the Speaker shall vacate his/her office immediately.

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

40. Which one of the following reflects the most appropriate relationship between law and liberty?

- (a) If there are more laws, there is less liberty.
- (b) If there are no laws, there is no liberty.
- (c) If there is liberty, laws have to be made by the people.
- (d) If laws are changed too often, liberty is in danger.

41. Consider the following statements:
1. No criminal proceedings shall be instituted against the Governor of a State in any court during his term of office.
  2. The emoluments and allowances of the Governor of a State shall not be diminished during his term of office.
- 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
42. The well-known painting "Bani Thani" belongs to the
- (a) Bundi school              (b) Jaipur school  
(c) Kangra school              (d) Kishangarh school
43. What is "Terminal High Altitude Area Defence (THAAD)", sometimes seen in the news?
- (a) An Israeli radar system  
(b) India's indigenous anti-missile programme  
(c) An American anti-missile system  
(d) A defence collaboration between Japan and South Korea
44. With reference to cultural history of India, consider the following statements:
1. Most of the Tyagaraja Kritis are devotional songs in praise of Lord Krishna.
  2. Tyagaraja created several new ragas.
  3. Annamacharya and Tyagaraja are contemporaries.
  4. Annamacharya kirtanas are devotional songs in praise of Lord Venkateshwara.
- Which of the statements given above are correct?
- (a) 1 and 3 only              (b) 2 and 4 only  
(c) 1, 2 and 3                  (d) 2, 3 and 4
45. Which of the following are regarded as the main features of the "Rule of Law"?
1. Limitation of powers
  2. Equality before law
  3. People's responsibility to the Government
  4. Liberty and civil rights
- Select the correct answer using the code given below:
- (a) 1 and 3 only              (b) 2 and 4 only  
(c) 1, 2 and 4 only              (d) 1, 2, 3 and 4
46. Which one of the following statements correctly describes the meaning of legal tender money?
- (a) The money which is tendered in courts of law to defray the fee of legal cases.  
(b) The money which a creditor is under compulsion to accept in settlement of his claims.  
(c) The bank money in the form of cheques, drafts, bills of exchange etc.  
(d) The metallic money in circulation in a country.
47. If a commodity is provided free to the public by the Government, then
- (a) the opportunity cost is zero.  
(b) the opportunity cost is ignored.  
(c) the opportunity cost is transferred from the consumers of the product to the tax-paying public.  
(d) the opportunity cost is transferred from the consumers of the product to the Government.
48. Increase in absolute and per capital real GNP do not connote a higher level of economic development, if
- (a) industrial output fails to keep pace with agricultural output.  
(b) agricultural output fails to keep pace with industrial output.  
(c) poverty and unemployment increase.  
(d) imports grow faster than exports.
49. Consider the following statements: Human capital formation as a concept is better explained in terms of a process which enables:
1. Individuals of a country to accumulate more capital.
  2. Increasing the knowledge, skill levels and capacities of the people of the country.
  3. Accumulation of tangible wealth.
  4. Accumulation of intangible wealth.
- Which of the statements given above is/are correct?
- (a) 1 and 2                      (b) 2 only  
(c) 2 and 4                      (d) 1, 3 and 4
50. Despite being a high saving economy, capital formation may not result in significant increase in output due to
- (a) Weak administrative machinery  
(b) Illiteracy  
(c) High population density  
(d) High capital-output ratio
51. After the Santhal Uprising subsided, what was/were the measure/measures taken by the colonial government?

- The territories called 'Santhal Paraganas' were created.
- It became illegal for a Santhal to transfer land to a non-Santhal.

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. Economically, one of the results of the British rule in India in the 19th century was the

- (a) Increase in the export of Indian handicrafts  
(b) Growth in the number of Indian owned factories  
(c) Commercialization of Indian agriculture  
(d) Rapid increase in the urban population

53. If the President of India exercises his power as provided under Article 356 of the Constitution of a particular State, then

- (a) the Assembly of the State is automatically dissolved.  
(b) the powers of the Legislature of that State shall be exercisable by or under the authority of the Parliament.  
(c) Article 19 is suspended in that State.  
(d) the President can make laws relating to that State.

54. Consider the following pairs:

	Craft	State
1.	Puthukkuli shawls	Tamil Nadu
2.	Sujni embroidery	Maharashtra
3.	Uppada Jamdani saris	Karnataka

Which of the pairs given above is/are correct?

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

55. In which of the following areas can GPS technology be used?

- Mobile phone operations
- Banking operations
- Controlling the power grids

Select the correct answer using the code given below:

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

56. Consider the following statements:

- The Reserve Bank of India manages and services Government of India Securities but not any State Government Securities.

- Treasury bills are issued by the Government of India and there are no treasury bills issued by the State Governments.

- Treasury bills offer are issued at a discount from the par value.

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

57. Consider the following statements:

- The Earth's magnetic field has reversed every few hundred thousand years.
- When the Earth was created more than 4000 million years ago, there was 54% oxygen and no carbon dioxide.
- When living organisms originated, they modified the early atmosphere of the Earth.

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

58. The terms 'WannaCry, Petya and EternalBlue' sometimes mentioned in the news recently are related to

- (a) Exoplanets              (b) Cryptocurrency  
(c) Cyber attacks          (d) Mini satellites

59. With reference to the circumstances in Indian agriculture, the concept of "Conservation Agriculture" assumes significance. Which of the following fall under the Conservation Agriculture?

- Avoiding the monoculture practices
- Adopting minimum tillage
- Avoiding the cultivation of plantation crops
- Using crop residues to cover soil surface
- Adopting spatial and temporal crop sequencing/crop rotations

Select the correct answer using the code given below:

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

60. The term "sixth mass extinction/sixth extinction" is often mentioned in the news in the context of the discussion of

- (a) Widespread monoculture practices in agriculture and large-scale commercial farming with indiscriminate use of chemicals in many parts of the world that may result in the loss of good native ecosystems.



- (b) Fears of a possible collision of a meteorite with the Earth in the near future in the manner it happened 65 million years ago that caused the mass extinction of many species including those of dinosaurs.
- (c) Large scale cultivation of genetically modified crops in many parts of the world and promoting their cultivation in other parts of the world which may cause the disappearance of good native crop plants and the loss of food biodiversity.
- (d) Mankind's over-exploitation/misuse of natural resources, fragmentation/loss of natural habitats, destruction of ecosystems, pollution and global climate change.

61. With reference to the Indian Regional Navigation Satellite System (IRNSS), consider the following statements:

1. IRNSS has three satellites in geostationary and four satellites in geosynchronous orbits.
2. IRNSS covers entire India and about 5500 sq. km beyond its borders.
3. India will have its own satellite navigation system with full global coverage by the middle of 2019.

Which of the statements given above is/are correct?

- (a) 1 only                      (b) 1 and 2 only  
(c) 2 and 3 only              (d) None

62. Consider the following statements:

1. Light is affected by gravity.
2. The Universe is constantly expanding.
3. Matter warps its surrounding space-time.

Which of the above is/are the prediction/predictions of Albert Einstein's General Theory of Relativity, often discussed in media?

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

63. With reference to the Genetically Modified mustard (GM mustard) developed in India, consider the following statements:

1. GM mustard has the genes of a soil bacterium that give the plant the property of pest-resistance to a wide variety of pests.
2. GM mustard has the genes that allow the plant cross-pollination and hybridization.

3. GM mustard has been developed jointly by the IARI and Punjab Agricultural University.

Which of the statements given above is/are correct?

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

64. Consider the following pairs:

Terms sometimes seen in news		Context/Topic
1.	Belle II experiment	Artificial Intelligence
2.	Blockchain technology	Digital/Cryptocurrency
3.	CRISPR – Cas9	Particle Physics

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

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

65. Which of the following statements best describes "carbon fertilization"?

- (a) Increased plant growth due to increased concentration of carbon dioxide in the atmosphere.
- (b) Increased temperature of Earth due to increased concentration of carbon dioxide in the atmosphere.
- (c) Increased acidity of oceans as a result of increased concentration of carbon dioxide in the atmosphere.
- (d) Adaptation of all living beings on Earth to the climate change brought about by the increased concentration of carbon dioxide in the atmosphere.

66. When the alarm of your smartphone rings in the morning, you wake up and tap it to stop the alarm which causes your geyser to be switched on automatically. The smart mirror in your bathroom shows the day's weather and also indicates the level of water in your overhead tank. After you take some groceries from your refrigerator for making breakfast, it recognises the shortage of stock in it and places an order for the supply of fresh grocery items. When you step out of your house and lock the door, all lights, fans, geysers and AC machines get switched off automatically. On your way to office, your car warns you about traffic congestion ahead and suggests an alternative route, and if you are late for a meeting, it sends a message to your office accordingly.



In the context of emerging communication technologies, which one of the following terms best applies to the above scenario?

- (a) Border Gateway Protocol
- (b) Internet of Things
- (c) Internet Protocol
- (d) Virtual Private Network

67. **With reference to solar power production in India, consider the following statements:**

With reference to solar power production in India, consider the following statements :

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India

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

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

68. **The staple commodities of export by the English East Indian Company from Bengal in the middle of the 18th century were**

- (a) Raw cotton, oil-seeds and opium
- (b) Sugar, salt, zinc and lead
- (c) Copper, silver, gold, spices and tea
- (d) Cotton, silk, saltpetre and opium

69. **Which one of the following is a very significant aspect of the Champaran Satyagraha?**

- (a) Active all-India participation of lawyers, students and women in the National Movement
- (b) Active involvement of Dalit and Tribal communities of India in the National Movement
- (c) Joining of peasant unrest to India's National Movement
- (d) Drastic decrease in the cultivation of plantation crops and commercial crops

70. **Who among the following were the founders of the "Hind Mazdoor Sabha" established in 1948?**

- (a) B. Krishna Pillai, E.M.S. Namboodiripad and K.C. George
- (b) Jayaprakash Narayan, Deen Dayal Upadhyay and M.N. Roy
- (c) C.P. Ramaswamy Iyer, K. Kamaraj and Veeresalingam Pantulu
- (d) Ashok Mehta, T.S. Ramanujan and G.G. Mehta

71. **Which reference to the religious practices in India, the "Sthanakvasi" sect belongs to**

- (a) Buddhism
- (b) Jainism
- (c) Vaishnavism
- (d) Shaivism

72. **With reference to the cultural history of India, consider the following statements:**

1. White marble was used in making Buland Darwaza and Khankah at Fatehpur Sikri.
2. Red sandstone and marble were used in making Bara Imambara and Rumi Darwaza at Lucknow.

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

73. **Which one of the following foreign travellers elaborately discussed about diamonds and diamond mines of India?**

- (a) Francois Bernier
- (b) Jean-Baptiste Tavernier
- (c) Jean de Thevenot
- (d) Abbe Barthelemy Carre

74. **Which reference to Indian history, who among the following is a future Buddha, yet to come to save the world?**

- (a) Avalokiteshvara
- (b) Lokeshvara
- (c) Maityera
- (d) Padmapani

75. **Which one of the following statements does *not* apply to the system of Subsidiary Alliance introduced by Lord Wellesley?**

- (a) To maintain a large standing army at other's expense
- (b) To keep India safe from Napoleonic danger
- (c) To secure a fixed income for the Company
- (d) To establish British paramountcy over the Indian States

76. **Which of the following led to the introduction of English Education in India?**

1. Charter Act of 1813
2. General Committee of Public Instruction, 1823
3. Orientalist and Anglicist Controversy

Select the correct answer using the code given below:

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

77. Which one of the following is an artificial lake?
- Kodaikanal (Tamil Nadu)
  - Kolleru (Andhra Pradesh)
  - Nainital (Uttarakhand)
  - Renuka (Himachal Pradesh)
78. With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements
- It is the flagship scheme of the Ministry of Labour and Employment.
  - It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.
  - It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.
- Which of the statements given above is/are correct?
- 1 and 3 only
  - 2 only
  - 2 and 3 only
  - 1, 2 and 3
79. In 1920, which of the following changed its name to "Swarajya Sabha"?
- All India Home Rule League
  - Hindu Mahasabha
  - South Indian Liberal Federation
  - The Servants of India Society
80. Which among the following events happened earliest?
- Swami Dayanand established Arya Samaj.
  - Dinabandhu Mitra wrote *Neeldarpan*.
  - Bankim Chandra Chattopadhyay wrote *Anandmath*.
  - Satyendranath Tagore became the first Indian to succeed in the Indian Civil Services Examination.
81. Which of the following is/are the possible consequence/s of heavy sand mining in riverbeds?
- Decreased salinity in the river
  - Pollution of groundwater
  - Lowering of the water-table
- Select the correct answer using the code given below:
- 1 only
  - 2 and 3 only
  - 1 and 3 only
  - 1, 2 and 3
82. With reference to agricultural soils, consider the following statements:
- A high content of organic matter in soil drastically reduces its water holding capacity.
  - Soil does not play any role in the sulphur cycle.
  - Irrigation over a period of time can contribute to the salinization of some agricultural lands.
- Which of the statements given above is/are correct?
- 1 and 2 only
  - 3 only
  - 1 and 3 only
  - 1, 2 and 3
83. The Partnership for Action on Green Economy (PAGE), a UN mechanism to assist countries transition towards greener and more inclusive economies, emerged at
- The Earth Summit on Sustainable Development 2002, Johannesburg
  - The United Nations Conference on Sustainable Development 2012, Rio de Janeiro
  - The United Nations Framework Convention on Climate change 2015, Paris
  - The World Sustainable Development Summit 2016, New Delhi
84. "3D printing" has applications in which of the following?
- Preparation of confectionery items
  - Manufacture of bionic ears
  - Automotive industry
  - Reconstructive surgeries
  - Data processing technologies
- Select the correct answer using the code given below:
- 1, 3 and 4 only
  - 2, 3 and 5 only
  - 1 and 4 only
  - 1, 2, 3, 4 and 5
85. Consider the following statements:
- The Barren Island volcano is an active volcano located in the Indian territory.
  - Barren Island lies about 140 km east of Great Nicobar.
  - The last time the Barren Island volcano erupted was in 1991 and it has remained inactive since then.
- Which of the statements given above is/are correct?
- 1 only
  - 2 and 3
  - 3 only
  - 1 and 3
86. Why is a plant called *Prosopis juliflora* often mentioned in news?
- Its extract is widely used in cosmetics.
  - It tends to reduce the biodiversity in the area in which it grows.
  - Its extract is used in the synthesis of pesticides.
  - None of these

87. Consider the following statements:

1. Most of the world's coral reefs are in tropical waters.
2. More than one-third of the world's coral reefs are located in the territories of Australia, Indonesia and Philippines.
3. Coral reefs host far more number of animal phyla than those hosted by tropical rainforests.

Which of the statements given above is/are correct?

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

88. "Momentum for Change: Climate Neutral Now" is an initiative launched by

- (a) The Intergovernmental Panel on Climate Change  
(b) The UNEP Secretariat  
(c) The UNFCCC Secretariat  
(d) The World Meteorological Organization

89. With reference to educational institutions during colonial rule in India, consider the following pairs:

	Institution	Founder
1.	Sanskrit College at Benaras	William Jones
2.	Calcutta Madarsa	Warren Hastings
3.	Fort William College	Arthur Wellesley

Which of the pairs given above is/are correct?

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

90. Consider the following pairs:

	Regions sometimes mentioned in news	Country
1.	Catalonia	Spain
2.	Crimea	Hungary
3.	Mindanao	Philippines
4.	Oromia	Nigeria

Which of the pair given above are correctly matched?

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

91. Consider the following events:

1. The first democratically elected communist party government formed in a State in India.
2. India's then largest bank, 'Imperial Bank of India', was renamed 'State Bank of India'.

3. Air India was nationalised and became the national carrier.
4. Goa became a part of independent India.

Which of the following is the correct chronological sequence of the above events?

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

92. Right to Privacy is protected as an intrinsic part of Right to Life and Personal Liberty.

Which of the following in the Constitution of India correctly and appropriately imply the above statement?

- (a) Article 14 and the provisions under the 42<sup>nd</sup> Amendment to the Constitution  
(b) Article 17 and the Directive Principles of State Policy in Part IV  
(c) Article 21 and the freedoms guaranteed in Part III  
(d) Article 24 and the provisions under the 44<sup>th</sup> Amendment to the Constitution

93. Consider the following:

1. Areca nut
2. Barley
3. Coffee
4. Finger millet
5. Groundnut
6. Sesamum
7. Turmeric

The Cabinet Committee on Economic Affairs has announced the Minimum Support Price for which of the above?

- (a) 1, 2, 3 and 7 only  
(b) 2, 4, 5 and 6 only  
(c) 1, 3, 4, 5 and 6 only  
(d) 1, 2, 3, 4, 5, 6 and 7

94. In which one of the following States is Pakhui Wildlife Sanctuary located?

- (a) Arunachal Pradesh  
(b) Manipur  
(c) Meghalaya  
(d) Nagaland

95. With reference to India's satellite launch vehicles, consider the following statements:

1. PSLVs launch the satellite useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
2. Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
3. GSLV Mk III is a four staged launch vehicle with the first and third stages using solid rocket motors; and the second and fourth stages using liquid rocket engines.



Which of the statements given above is/are correct?

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

96. **With reference to the governance of public sector banking in India, consider the following statements:**

1. Capital infusion into public sector banks by the Government of India has steadily increased in the last decade.
2. To put the public sector banks in order, the merger of associate banks with the parent State Bank of India has been affected.

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

97. **Consider the following items:**

1. Cereals grains hulled
2. Chicken eggs cooked
3. Fish processed and canned
4. Newspapers containing advertising material

Which of the above items is/are exempted under GST (Goods and Services Tax)?

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

98. **Consider the following statements:**

1. The definition of "Critical Wildlife Habitat" is incorporated in the Forest Rights Act, 2006.

2. For the first time in India, Baigas have been given Habitat Rights.

3. Union Ministry of Environment, Forest and Climate Change officially decides and declares Habitat Rights for Primitive and Vulnerable Tribal Groups in any part of India.

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

99. **Consider the following:**

1. Birds
2. Dust blowing
3. Rain
4. Wind blowing

Which of the above spread plant diseases?

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

100. **With reference to organic farming in India, consider the following statements:**

1. 'The National Programme for Organic Production' (NPOP) is operated under the guidelines and directions of the Union Ministry of Rural Development.
2. 'The Agricultural and Processed Food Products Export Development Authority' (APEDA) functions as the Secretariat for the implementation of NPOP.
3. Sikkim has become India's first fully organic State.

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

OSWAAL

**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)
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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 (b) is correct.**

**Explanation:** Swatantra party was founded by C. Rajagopalachari which was an Indian classical liberal political party.

It advocated free market than socialist pattern of society. The First Lok Sabha of India was constituted after India's first general election on 17 April, 1952 which lasted its full tenure and was dissolved on 4 April, 1957. Its first session commenced on 13 May, 1952.

Total Lok Sabha seats were 489 and the Indian National Congress (INC) won 364 seats. They were followed by Independents, winning a total of 37 seats. The Communist Party of India (CPI) and the Socialist Party (India) followed with 16 and 12 seats respectively. The Indian National Congress got 45% of the total votes in this election and won 76% of the 479 contested seats.

The Communist Party of India came second and won only 16 seats. In 1969, an official leader of the opposition was recognised for the first time. However, in 1977, it was given statutory recognition.

The leader of the Opposition is recognised as a leader of the largest Opposition party having not less than 1/10th seats of the total strength of the house.

Leader of opposition plays important role in various appointments like CBI CVC CIC Lokpal.

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

**Explanation:** *Xerophytes* are the plants that grow in extreme climatic conditions like dry weather, less availability of water etc. They ensure their survivability through various adaptations which have been mentioned below-

**Adaptations**

1. Conservation of Water Modifications
  - a. Few or no leaves or leaves may get converted into spines
  - b. Petiole modified into leaf-like structure
  - c. Stem reduced, branching sparse

**2. Storage of Water Modifications**

Thick, fleshy and succulent leaves as well as stem

**3. Modification to prevent loss of water by transpiration**

- a. Reduced intercellular spaces
- b. Spongy parenchyma/ palisade parenchyma present
- c. Stomata on lower surface, sunken in stomatal pits

**4. Modifications to survive in extreme hot climatic conditions**

- a. Leaves covered with dense hairs;
- b. Leaf surfaces shiny or glabrous
- c. Leaf blade remains rolled during the day

**5. Efficient mechanism of water absorption**

- a. Long and profusely branched roots
- b. Dense root hairs
- c. Well developed xylem

Hard and waxy leaves in the region help in preventing water loss through evaporation.

Tiny leaves are found in the plants with a wax coating which again helps in preventing water loss.

Plants have fleshy stems that help in storing water like Cactus.

Deep roots and thorns.

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

**Explanation:** Rajasthan had the highest percentage of agricultural households (78.4 percent) among its rural households. Uttar Pradesh stands at 2nd position (74.8 percent) followed by Madhya Pradesh (70.8 percent).

The least percentage share of agricultural households (27.3 percent) in its rural households is in Kerala. During the reference period of July 2012 - June 2013, about 45 percent out of the total agricultural households in the country belonged to Other Backward Classes (OBC), about 16 percent were from Scheduled Castes (SC) and 13 percent were from Scheduled Tribes (ST).



The majority of households in all the major states reported agricultural activities like cultivation, livestock and other agricultural activities as the principal source of income except Kerala.

About 61 percent of the agricultural households of Kerala reported to have earned their maximum income from sources other than agricultural activities.

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

**Explanation:** The National Green Tribunal (NGT) is a statutory body. It was established by the National Green Tribunal Act in the year 2010.

It was set up to handle cases related to environmental issues and speed up the process.

The Tribunal is not bound by the procedure laid down under the Code of Civil Procedure, 1908. On the other hand, it shall be guided by principles of natural justice.

The Tribunal provides speedy environmental justice in environmental matters and helps reduce the burden of litigation in the higher courts. It is mandated to make an endeavour for disposal of applications or appeals within 6 months of filing of the same. New Delhi is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai shall be the other 4 places of sitting of the Tribunal.

The Central Pollution Control Board (CPCB), a statutory organisation, was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974.

It serves as a field formation and also provides technical services to the Ministry of Environment and Forests of the provisions of the Environment (Protection) Act, 1986. The Principal Functions of the CPCB, as spelt out in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 are:

- (i) To promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution, and
- (ii) To improve the quality of air and to prevent, control or abate air pollution in the country.

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

**Explanation:** The Ninth Schedule was added to the Constitution by the 1<sup>st</sup> Constitutional Amendment Act, 1951. Article 31-B was also inserted in the constitution with a view to provide a “protective umbrella” to land reforms laws to save them from being challenged in courts on the ground of violation of fundamental rights. The SC upheld the validity of Article 31-B and Parliament’s power to place a particular law in the Ninth Schedule.

The Supreme Court in *I.R Coelho vs State of Tamil Nadu* has said that laws placed in the Ninth Schedule are open to judicial review and such laws do not enjoy a blanket protection. Laws placed in the Ninth Schedule were open to challenge when the Supreme Court propounded the “basic structure” doctrine after the *Keshwananda Bharti Judgement 1973*.

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

**Explanation:** The businesses having annual turnover of more than ₹50 crores will have to offer low-cost digital payment options to customers from 1st January, 2020 and the Merchant Discount Rate (MDR) will not be levied on either customers or merchants.

Low-cost digital payment modes will include options such as BHIM UPI, UPI QR Code, Aadhaar Pay, Debit Cards, NEFT, RTGS, among others.

The MDR is a fee charged from a merchant by a bank for accepting payments from customers through credit and debit cards in their establishments. It compensates the card issuing bank, the lender which puts the PoS terminal and payment gateways such as Mastercard or Visa for their services. The MDR charges are usually shared in the pre-agreed proportion between the bank and a merchant and expressed in the percentage of the transaction amount.

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

**Explanation:** Consequences of a country becoming a member of the NSG means:

1. The Nuclear Suppliers Group is essentially a traders’ cartel. India has its own indigenously developed technology but to get its hands on state of the art technology that countries within the

NSG possess, it has to become part of the group.

2. As India has committed to reduce its dependence on fossil fuels and ensuring that 40% of its energy is sourced from renewable and clean sources, there is a pressing need to scale up nuclear power production.
3. India could sign the Nuclear Non-Proliferation Treaty and gain access to all this know-how but that would mean giving up its entire nuclear arsenal. Given that it is situated in an unstable and unpredictable neighbourhood, India is unlikely to sign the NPT or accede to the Comprehensive Test Ban Treaty (CTBT) that puts curbs on any further nuclear tests.
4. With access to the latest technology, India can commercialize the production of nuclear power equipment. This, in turn, will boost innovation and high tech manufacturing in India and can be leveraged for economic and strategic benefits.

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

*Explanation:* The equalization levy is aimed at taxing foreign companies which have a significant local client base in India but are billing them through their offshore units, effectively escaping the country's tax system.

The Equalization Levy was introduced in India in 2016. Its intention was taxing the digital transactions, i.e., the income accruing to foreign e-commerce companies from India. It aimed at taxing business to business transactions. The equalization levy was introduced as a separate legislation under the Finance Bill, not as part of the Income Tax Act, but global firms that offer such services in India cannot claim a tax credit in their home country under the Double Taxation Avoidance Agreements.

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

*Explanation:*

1. The FRBM (Fiscal Responsibility and Budget Management) Review Committee was formed in 2016 under Mr. N.K. Singh as the chairman and submitted its

report in January 2017. The Committee suggested that debt should be used as the primary target for fiscal policy. A debt to GDP ratio of 60% should be targeted with a 40% limit for the Centre and 20% limit for the States. The targeted debt to GDP ratio should be achieved by 2023.

2. The Central Government has domestic liabilities of 46.1% of GDP (2016-17) and as a per cent of GDP, States' liabilities increased to 23.2 per cent at the end of March 2016.
3. The Constitution of India empowers State Governments to borrow only from domestic sources {Article 293 (1)}. The State is required to obtain Central Government's prior approval before incurring debt {Article 293 (3)}.

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

*Explanation:* India occupies a prominent position in the world oilseeds industry with the contribution of around 10% in worldwide production. But the demand of edible oils extracted from oilseeds in addition to palm oil is significantly higher than the domestic production, leading to dependence on imports i.e. 60% of requirement.

The government imposes customs duty on edible oils to safeguard the interests of the domestic oil crushing industry. The government has fixed 25 % duty on two major edible oils namely crude sunflower seed oil, and crude canola/rapeseed/mustard, but 30 % duty on crude soyabean oil.

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

*Explanation:*

1. Lala Lajpat Rai was also called 'Punjab Kesari' and 'Lion of Punjab'.
2. Along with Bipin Chandra Pal and Bal Gangadhar Tilak, he formed the Lal-Bal-Pal trio of extremist leaders.
3. He was also involved with the Hindu Mahasabha.
4. He fought against untouchability.
5. He wrote biographies of Mazzini, Garibaldi, Shivaji and Shrikrishna.
6. He participated in many political agitations in Punjab and joined the Indian National Congress (INC).

7. He founded the Home Rule League of America in 1917 in New York. In the USA, he worked to get moral support for the Indian independence movement from the international community.
8. He was also elected President of the All India Trade Union Congress.
9. He protested against the Rowlatt Act and the Jallianwala Bagh massacre.
10. He was elected deputy leader of the Central Legislative Assembly in 1926.
11. In 1928, he moved a resolution in the assembly refusing cooperation with the Simon Commission since the Commission had no Indian members.

**Social organisation:**

He founded Hindu Relief movement in 1897 and the Servants of People Society in 1921.

He co-founded the Punjab National Bank in 1894.

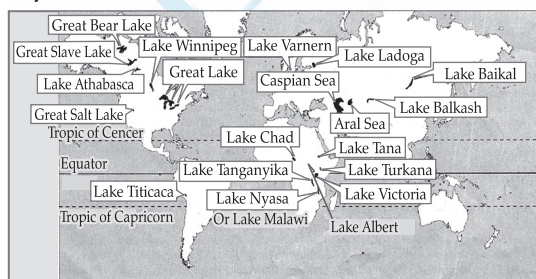
12. **Option (d) is correct.**

**Explanation:** The Aadhar card can't be used as the proof of citizenship or domicile under the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Bill, 2016.

The Aadhaar Act Regulations state that the Unique Identification Authority of India (UIDAI), the agency responsible for issuing the numbers and managing the database, can omit permanently or deactivate temporarily an individual's Aadhaar number. The regulations give the UIDAI the power to deactivate Aadhaar numbers even in the absence of an effective grievance redressal procedure for those whose numbers have been suspended.

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

**Explanation:**



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

**Figure: Important lakes of World**



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

**Figure: Aral sea**

As per NASA, the Aral Sea has shrunk by about 75% of its original size over the last 50 years, mainly because of water diversion for agricultural usage in the surrounding areas.

Today, it stands at less than 10 meters from a depth of 68 meters in the 1960s. In Lake Baikal, the water level has gone below the critical mark of 456m, which is eleven times since 1962.

Thus, while the Aral Sea has dried up immensely, Lake Baikal's shrinkage is not comparable to that of the Aral Sea.

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

**Explanation:** The World Justice Project releases the Rule of Law Index which is a quantitative assessment tool. It is designed to offer a detailed and comprehensive picture of the extent to which countries adhere to the rule of law in practice.

It provides data on eight dimensions of the rule of law: limited government powers; absence of corruption; order and security; fundamental rights; open government; regulatory enforcement; civil justice; and criminal justice. The index is typically published annually.

The World Justice Project releases Rule of Law Index. This index measures how the rule of law is experienced and perceived by the general public across the globe. It is the world's leading source for original, independent data on the rule of law.



## 15. Option (c) is correct.

**Explanation:** The National Financial Switch (NFS) ATM network was taken over by NPCI (National Payment Corporation of India) from the Institute for Development and Research in Banking Technology (IDRBT) in December 2009. The NFS ATM network is now the leading multilateral ATM network in the country.

It has established a strong and sustainable operational model with in-house capabilities.

**National Payments Corporation of India (NPCI):**

- It is an umbrella organisation for operating retail payments and settlement systems in India. It is an initiative of the Reserve Bank of India (RBI) and the Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007.
- It has been incorporated as a "Not for Profit" Company under the provisions of Section 25 of the Companies Act 1956 (now Section 8 of the Companies Act 2013).

## 16. Option (a) is correct.

**Explanation:** Capital Adequacy Ratio (CAR) is the ratio of a bank's capital in relation to its risk weighted assets and current liabilities.

It is measured as:

Capital Adequacy Ratio = (Tier I + Tier II + Tier III (Capital funds)) / Risk weighted assets

The risk-weighted assets take into account credit risk, market risk and operational risk.

The Basel III norms stipulated a capital to risk-weighted assets of 8%.

However, as per RBI norms, Indian scheduled commercial banks are required to maintain a CAR of 9% while Indian public sector banks are emphasized to maintain a CAR of 12%.

It is decided by central banks and bank regulators. It is to prevent commercial banks from taking excess leverage and becoming insolvent in the process.

## 17. Option (c) is correct.

**Explanation:** Aadhaar Authentication is the process where the Aadhaar number, along with other attributes, including biometrics, are submitted online to the Central Identities Data Repository for its verification and such

repository verifies the correctness on the basis of the information available with it. The Unique Identification Authority of India (UIDAI) entertains an authentication request only upon a request sent by a requesting entity electronically, but in accordance with its regulations.

Demographic Authentication, one-time pin based authentication, Biometric based authentication (finger prints, iris), Multi-factor authentication are some modes for authentication.

To avoid request tampering and man-in-the-middle attacks, it is essential that encryption of data happens at the time of capture on the capture device to support strong end-to-end security. Authentication related APIs are enabled only for valid ASAs and only for their registered static IP addresses coming through a secure private network.

## 18. Option (d) is correct.

**Explanation:** Yemen is now on the brink of "the world's largest famine", according to the United Nations. The country is fighting a massive cholera outbreak and about 17 million people are dependent on external aid for food and medicine. Besides the miseries of civil war and aerial bombardment, breakdown of government services, lack of drinking water and a crumbling health sector are fast turning Yemen into a failed state and it is becoming a breeding ground for extremist groups such as al-Qaeda in the Arabian Peninsula.

One year after South Sudan briefly declared a famine, more than half of the people in the nation face extreme hunger amid civil war.

## 19. Option (a) is correct.

**Explanation:** In 1854, Charles Wood prepared a despatch on an educational system for India. It is considered the "Magna Carta of English Education in India". It was the first comprehensive plan for the spread of education in India.

1. It asked the Government of India to assume responsibility for education of the masses.
2. It systematised the hierarchy from vernacular primary schools in villages at bottom followed by Anglo-Vernacular

High Schools and an affiliated college at the district level and affiliating universities in the presidency towns.

3. It recommended English as the medium of instruction for higher studies and vernaculars at school level.
4. It laid stress on female and vocational education and on teachers' training.
5. It laid down that the education imparted in government institutions should be secular.
6. It also recommended a system of grants-in-aid to encourage private enterprise.

The despatch recommended the establishment of universities in the three Presidency towns of Calcutta, Bombay and Madras. The universities were to be modeled after the London University and these were to have a senate comprising of a Chancellor, a Vice-Chancellor and fellows who were nominated by the Government. The universities were to organize departments for English, Arabic, Sanskrit and Persian as well as law and civil engineering.

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

**Explanation:** The Committee on Subordinate Legislation examines and reports to the House whether the powers to make rules, regulations, by laws, schemes or other statutory instruments conferred by the Constitution or delegated by Parliament are being properly exercised. It was constituted in 1953. In both the Houses, the committee consists of 15 members. Members are nominated by the Speaker or Chairman in Lok Sabha and Rajya Sabha respectively. Ministers can't be the members of this committee.

The Chairman of the Committee is appointed by the Speaker or Chairman among its members.

Chairman has only a casting vote in discussions.

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

**Explanation:** The National Council for Teacher Education (NCTE) has laid down the minimum qualifications for a person to be eligible for appointment as a teacher in class I to VIII under section 23 (1) of the Right of Children to Free and Compulsory Education (RTE) Act, 2009.

One of the essential qualifications for a person to be eligible for appointment as a teacher

in any of the primary schools is that he/she should pass the Teacher Eligibility Test (TET) which will be conducted by the appropriate Government.

Features of the Right to Education (RTE) Act, 2009:

- The RTE Act aims to provide primary education to all children aged 6 to 14 years.
- It enforces Education as a Fundamental Right (Article 21-A).
- The Act mandates 25% reservation for disadvantaged sections of the society where disadvantaged groups include:
  1. SCs and STs
  2. Socially Backward Class
  3. Differently abled
- It also makes provisions for a non-admitted child to be admitted to an age appropriate class.
- It also states that sharing of financial and other responsibilities between the Central and State Governments.
- It lays down the norms and standards related to:
  1. Buildings and infrastructure
  2. School-working days
  3. Teacher-working hours.
  4. Pupil Teacher Ratios (PTRs)
- It also provides for prohibition of deployment of teachers for non-educational work, other than decennial census, elections to local authority, state legislatures and parliament, and disaster relief.

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

**Explanation:**



Figure: Thang-ta dance of Manipur

ChapcharKut festival is celebrated in March after the completion of jhum operation. It is a spring festival of Mizos.

Khongjom Parba is a style of ballad singing from Manipur using Dholak (drum). The stories of the heroic battle fought by Manipuris against the mighty British Empire in 1891 are depicted while singing. It incites the spirit of patriotism and nationalism among the people. Thang-ta dance of Manipur was evolved from the martial arts drills promoted by the kings of Manipur.

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

*Explanation:* Various Central Acts like Prevention of Food Adulteration Act, 1954, Fruit Products Order, 1955, Meat Food Products Order, 1973 and Milk Products Order, 1992 etc. were repealed after commencement of FSSAI Act, 2006.

The Ministry of Health & Family Welfare is the Administrative Ministry for the implementation of FSSAI. The Chairperson and Chief Executive Officer of Food Safety and Standards Authority of India (FSSAI) are appointed by Government of India. Rajesh Bhusan is the current chairperson and Shri Arun Singhal is the current CEO for FSSAI.

Prevention of food adulteration was part of the Directorate General of Health Services. It has been detached from the direct administrative control of the Health Ministry, this authority is holding independent authority and has attained special status. The FSS Act, 2006 consolidates various acts & orders that had earlier handled food related issues in various Ministries and Departments.

FSSAI was consequently established in 2008 but work within the Food Authority effectively began in 2011 after its Rules and key Regulations were notified.

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

*Explanation:* The Two-State Solution of the Israel-Palestine issue envisages an independent State of Palestine alongside the State of Israel west of the Jordan river. The boundary between the Israel and Palestine is still subject to dispute and negotiation. The Palestinian and Arab leadership are insisting on the "1967 borders", which is not accepted by Israel.

The two-state solution has been the primary focus of efforts for decades to achieve peace in the Israeli-Palestinian conflict.

The 1947 UN Partition Plan led to decades of military action and violence between Israel and Palestine. It was only after the mediation of the US, in the 1991 Madrid Peace conference a two-state solution was agreed to resolve the Israeli-Palestinian conflict.

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

*Explanation:* The National Food Security Act, 2013, provides for coverage of upto 75% of the rural population and upto 50% of the urban population for receiving subsidized foodgrains under Targeted Public Distribution System (TPDS). It is covering about two-thirds of the population of our country. It provides that the eldest woman of the household of age 18 years or above is to be the head of the household for the purpose of issuing of ration cards. Pregnant women and lactating mothers during pregnancy and six months after the child birth are entitled to receive meals and maternity benefit of Rs. 6,000.

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

*Explanation:* A geographical indication (GI) is a name or sign or an indication used on products which connotes to a specific geographical location or origin of the concerned product.

Under Articles 1 (2) and 10 of the Paris Convention for the Protection of Industrial Property, geographical indications are covered as an element of IPRs. They are also covered under Articles 22 to 24 of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement, which was part of the Agreements concluding the Uruguay Round of GATT negotiations.

India as a member of the World Trade Organization (WTO) enacted the Geographical Indications of Goods (Registration & Protection) Act, 1999 has come into force with effect from 15th September 2003.

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

*Explanation:* Unlike coal, the auction of mining licences of non-coal minerals is conducted by the respective State governments. The iron ore mines are located in Bhilwara in Rajasthan. India has gold deposits spread across



several States including Andhra Pradesh, Chhattisgarh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Tamil Nadu and Rajasthan. The governments of both Jharkhand and Andhra Pradesh have auctioned several gold mines in recent years.

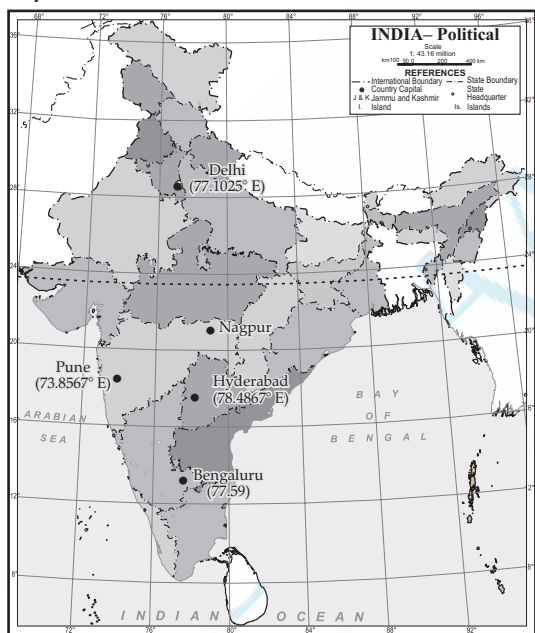
28. **Option (a) is correct.**

**Explanation:** Bharat Interface for Money (BHIM) is a payment app that makes simple, easy and quick transactions using Unified Payments Interface (UPI). Anyone by using their UPI ID or scanning QR with the BHIM app can make direct bank payments to anyone. One can also request money through the app from a UPI ID.

There are three levels of authentication from a consumer point of view that are required in this app. One is the device ID and mobile number, then the bank account which is linked to this app and finally the UPI Pin which is needed to complete the transaction. A chip-pin debit card only has two factors of authentication.

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

**Explanation:**



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

**Figure: Representation of cities nearest to the coordinates of Delhi**

Delhi and Bengaluru, both the cities are located almost on the same longitude.

- Longitude of Delhi- 77.1025° E
- Longitude of Bengaluru- 77.5946° E
- Longitude of Hyderabad- 78.4867° E

- Longitude of Nagpur- 79.0882° E
- Longitude of Pune- 73.8567° E

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

**Explanation:** India recently ratified the two Core Conventions of International Labour Organization (ILO) i.e., Convention 138 - admission of age to employment and Convention 182 - worst forms of Child Labour. The eight-core conventions of the ILO are:

- Forced Labour Convention (No. 29)
- Abolition of Forced Labour Convention (No.105)
- Equal Remuneration Convention (No.100)
- Discrimination (Employment and Occupation) Convention (No.111)
- Minimum Age Convention (No.138)
- Worst forms of Child Labour Convention (No.182)
- Freedom of Association and Protection of Right to Organised Convention (No.87)
- Right to Organise and Collective Bargaining Convention (No.98)

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

**Explanation:** Article 110 of the Constitution deals with the definition of money bills. This article states that a bill will be considered a money bill if it contains 'only' provisions dealing with all or any of the following matters:

1. The imposition, abolition, remission, alteration or regulation of any tax and the regulation of the borrowing of money or the giving of any guarantee by the Government of India.
2. The custody of the Consolidated Fund of India or the Contingency Fund of India, the payment of moneys into or the withdrawal of money from any such fund.
3. The appropriation of money out of the Consolidated Fund of India;
4. Declaration of any expenditure charged on the Consolidated Fund of India or increasing the amount of any such expenditure;
5. The receipt of money on account of the Consolidated Fund of India or the public account of India or the custody or issue of



such money, or the audit of the accounts of the Union or of a State; or

6. Any matter incidental to any of the matters specified above.

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

**Explanation: Article 54: Election of President**

Article 52 of the Indian Constitution provides that there shall be a President of India. The incumbent and the 14<sup>th</sup> President of India is Shri Ram Nath Kovind.

The President shall be elected by the members of an electoral college consisting of:

- (a) The elected members of both Houses of Parliament; and
- (b) The elected members of the Legislative Assemblies of the States. In this article and in article 55, "State" includes the National Capital Territory of Delhi and the Union territory of Pondicherry.

**Article 55: Manner of Election of President**

- (1) There shall be uniformity in the scale of representation of the different States at the election of the President.
- (2) For the purpose of securing such uniformity the number of votes which each elected member of Parliament and of the legislative Assembly of each State is entitled to cast at such election shall be determined in the following manner:
- (3) The election of the President shall be held in accordance with the system of proportional representation by means of the single transferable vote and the voting at such election shall be by secret ballot.
- (4) The value of the vote of each member of a State Legislative Assembly included in the Electoral College is calculated by dividing the population of that State (as per 1971 Census) by the total number of elected members of the Assembly, and then further dividing the quotient by 1000.
- (5) The total value of votes of all the States is divided by the total number of elected members of Parliament (Lok Sabha 543+Rajya Sabha 233) to get the value of votes of each Member of Parliament.

Hence the value of vote of each member of the parliament is same.

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

**Explanation:** India has ratified the Additional Protocol to grant greater ease to International Atomic Energy Agency to monitor India's civilian atomic programme. The IAEA had in March 2009 approved an additional protocol to India's safeguards agreement consequent to place its civilian nuclear facilities under IAEA safeguards.

**International Atomic Energy Agency**

It is known as the world's "Atoms for Peace and Development". It is an organization within the United Nations family. The IAEA is the international centre for cooperation in the nuclear field.

It was created in 1957 as an independent international organization. Its emergence was a response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.

Headquarter: Vienna, Austria.

The IAEA works with its Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.

It was awarded the Nobel Peace Prize for their work for a safe and peaceful world in the year 2005.

It reports annually to the United Nation General Assembly.

It (when necessary) also reports to the UN Security Council in regards to instances of members' non-compliance with safeguards and security obligations.

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

**Explanation:**



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

**Figure: Map of Asian Nations, or ASEAN**

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The Association of Southeast Asian Nations, or ASEAN, was established on 8 August 1967 in Bangkok, Thailand. It was established with the signing of the ASEAN Declaration (Bangkok Declaration) by the founding members of ASEAN, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. The ASEAN has existing free trade agreements with Australia, China, India, Japan, South Korea and New Zealand.

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

**Explanation:** The Global Alliance for Climate-Smart Agriculture (GACSA) is an inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture (CSA). It was launched in September 2014 in the margins of the UN Climate Summit. The concept of Climate-Smart Agriculture (CSA) was originally developed by FAO (The Food and Agriculture Organization) and officially presented at the Hague Conference on Agriculture, Food Security and Climate Change in 2010 through the paper "Climate-Smart Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation".

The GACSA alliance is made up of a diverse set of members that includes governments, NGOs, the private sector, etc.

Recognizing the importance of empowering farmers, GACSA facilitates dialogue, knowledge exchange and partnerships through an open, diverse and inclusive multi-stakeholder platform, to catalyze actions on enhancing agriculture, forestry, livestock and fisheries practices and systems that increase productivity in a sustainable way, improve resilience and adaptation and reduce/sequester emissions.

Key donor organisations engaging with GACSA include the governments of Canada, France, Japan, Netherlands, Norway, Switzerland, the United Kingdom and the United States of America. There is not enough evidence of India being instrumental in the creation of the GACSA apart from some of the Indian NGOs are the members of the GACSA.

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

**Explanation: Digital India Programme:** It was launched in 2015. The programme has been enabled for several important government schemes, such as BharatNet, Make in India, Startup India and Standup India, industrial corridors etc.

The Government of India has launched the Digital India programme with the vision to transform India into a digitally empowered society and knowledge economy.

Under the Digital India Plan, NII would integrate the network and cloud infrastructure in the country. It will provide high speed connectivity and cloud platform to various government departments up to the panchayat level. Cities with the population of over 1 million and tourist centres would be provided with public wi-fi hotspots to promote digital cities. The scheme would be implemented by DoT and the Ministry of Urban Development (MoUD).

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

**Explanation:**

- Aleppo is located in Syria.
- Kirkuk and Mosul are in Iraq.
- Majar-i-Sharif is in Afghanistan.

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

**Explanation:** The Government of India Act of 1935 envisaged an all-India federation. The federation consisted of eleven Governor's provinces, six Chief Commissioner's provinces, and such Indian States as would agree to join the federation. The governmental subjects were divided into three Lists i.e., Federal, Provincial and Concurrent. The provincial legislatures and the federal legislature were given exclusive power to make law on matters in the Provincial list and the Federal List respectively. In case of conflict between a provincial law and a federal law on a matter enumerated in the Concurrent List, the latter shall prevail, and the former would, to the extent of the repugnancy be void. Residuary powers were vested in the Governor-General. The Governor-General in his discretion could assign any such power by public notification to the federal legislature or the provincial legislature.

## 39. Option (a) is correct.

**Explanation:** Articles from 178 to 187 deals with the officers of the State Legislature. They include the Speaker, Deputy Speaker, Chairman of Legislative Council, Deputy Chairman of Legislative Council etc.

According to the provisions given in Article 179 of Indian Constitution, a member holding office as the Speaker or the Deputy Speaker of an Assembly:

- (a) shall vacate his/her office if he ceases to be a member of the Assembly;
- (b) may at any time by writing under his/her hand addressed, if such member is the Speaker to the Deputy Speaker and if such member is the Deputy Speaker to the Speaker resign his office; and
- (c) maybe removed from his/her office by a resolution of the Assembly passed by a majority of all the then members of the Assembly. Such a resolution can be moved only after giving 14 days advance notice.

Article 179 of the Indian Constitution provides that the Speaker shall not vacate his office until immediately before the first meeting of the Assembly after the dissolution.

## 40. Option (b) 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 individuals. It has been very aptly said that your liberty to swing your arm ends there where my nose begins. For liberty to be enjoyed by everyone, it should have reasonable restraints. The freedom of many requires restraint of law on the freedom of some. Liberty means freedom of thought, expression and action. However, it does not mean freedom to do anything that one desires. Therefore, freedom is defined in such a manner that every person will enjoy his/her freedom without threatening the freedom of others and without endangering the law and order situation. So if there are no laws, then there will be chaos and no individual can enjoy his/her liberty.

## 41. Option (c) is correct.

**Explanation:** The governor is also entitled to a number of privileges and immunities as the President. During his/her term of office, he/she is immune from any criminal proceeding. The Governor is entitled to such emoluments, allowances and privileges as may be determined by Parliament. His/her emoluments and allowances cannot be diminished during his/her term of office.

**According to Article 361:**

No criminal proceedings whatsoever shall be instituted in any court or no process for the arrest or imprisonment shall be issued from any court against the President or the Governor of a State during his/her term of office.

**According to Article 158:**

The Governor shall be entitled without payment of rent to the use of his/her official residences and shall also be entitled to such emoluments, allowances and privileges as may be determined by Parliament by law and until provision in that behalf is so made such emoluments, allowances and privileges as specified in the Second Schedule.

The emoluments and allowances of the Governor shall not be diminished during his term of office.

## 42. Option (d) is correct.

**Explanation:**



**Figure: Bani Thani**

Bani Thani is an Indian painting in the Kishangarh school of paintings. Bani Thani was a singer and poet in Kishangarh in the



time of Raja Samant Singh (1748–1764). Later, she became the mistress of Raja Samant Singh. After he abdicated the throne the couple retired to a comfortable life in Brindavan, to whom Samant Singh was greatly devoted. A group of Indian paintings of around 1750 attributed to Nihâl Chand from the Marwar school of Kishangarh show Krishna and Radha, using the same models, who are assumed to be Sawant Singh and Bani Thani.

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

*Explanation:* The Terminal High Altitude Area Defense, or simply abbreviated as THAAD, is an American missile defence system that is designed to intercept and destroy short and medium -range ballistic missiles in their final flight phase. It was first proposed in 1987 and then finally deployed in 2008.

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

*Explanation:* Most of Tyagaraja's songs were in praise of Rama. He is credited with various musical innovations, including the use of a structured variation of musical lines within the performance, a practice that may have been derived from improvisatory techniques. Tyagaraja belonged to the 18th century and Annamacharya to the 15th century. Annamacharya is the earliest known Indian musician to compose songs called sankirtanas in praise of the god Venkateswara, a form of Vishnu.

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

*Explanation:* The Fundamental Rights are constituted in Part-III of the Indian Constitution. These are considered the restriction on the law making power of the Indian Parliament. The state has no power to deprive a person of his/her life and liberty without the authority of law. The meaning of the rule of law is that the government should be conducted within a framework of recognized rules and principles which restrict discretionary powers. A. V. Dicey in his book 'The Law and the Constitution', published in the year 1885, attributed three meanings to the doctrine of the rule of law:

1. No man is punished except for a breach of law (absence of arbitrary power).

2. Equality before the law, i.e., equal subjection of all citizens (rich or poor, high or low, official or non-official) to the ordinary law of the land administered by the ordinary law courts.

3. The primacy of the rights of individual, i.e., the constitution is the result of the rights of the individual as defined and enforced by courts of law.

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

*Explanation:* Any form of payment recognised by a government that is used to pay debts or financial obligations, such as tax payments, is considered legal tender.

Legal tender laws effectively prohibit the use of anything other than existing legal tender in the economy as money.

By law, the legal denomination of a country's currency must be accepted as a medium of exchange and payment for a money debt.

The RBI Act of 1934, which grants the Central Bank the sole authority to issue banknotes, states that "every banknote shall be legal tender in payment for the amount expressed therein in any place in India."

The acceptance or rejection of legal tender status is significant because paper money derives all of its value from the government's acceptance of it.

When this legal tender status is withdrawn, the process is known as demonetization.

Legal tender performs the economic functions of money as well as a few other functions, such as making monetary policy and manipulation of currency possible.

The cheques are not the example of legal tenders because they can be refused as a mode of payment settlement.

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

*Explanation:* Opportunity cost is the cost of choosing one alternative over another. It refers to a benefit that a person could have received but gave up to take another course of action. In other words, an opportunity cost represents an alternative given up when a decision is made. Opportunity cost is also called the economic cost.



## 48. Option (c) is correct.

*Explanation:* An essential aspect of development is to provide or enable the benefits to the maximum number to experience the fruits of development. Concepts of per capita income (per capita GDP or per capita Net State Domestic Product (NSDP)) are not able to capture this aspect of development. There may be a case wherein increase in absolute and per capita GNP is reflective of growth in income of a small section of society and the majority of the population is poverty stricken and unemployed. Multi-dimensional non-monetary social indicators are better reflectors of overall economic development in the society.

## 49. Option (c) is correct.

*Explanation:* The process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for the economic and political development of the country is called the human capital formation. It is associated with investment in man and his development as a creative and productive resource. The trust among people in a society, an efficient judicial system, clear property rights, effective government and good education system etc., are the factors of intangible wealth. Human capital formation enables accumulation of intangible wealth. Human capital formation is considered as the outcome of investments in

1. education
2. health
3. skill/on-the-job training
4. migration
5. information/digital literacy

## 50. Option (d) is correct.

*Explanation:* Increasing the stock of real capital in a country is called the capital formation. In other words, capital formation involves the making of more capital goods such as machines, tools, factories, transport equipment, materials, electricity, etc., which are all used for future production of goods. For making additions to the stock of capital, saving and investment are essential. Capital output ratio is the amount of capital needed to produce one unit of output. For example,

suppose that investment in an economy is 32% (of GDP) and the economic growth corresponding to this level of investment is 8%. Here, Rs 32 investment produces an output of Rs 8. The capital output ratio is  $\frac{32}{8}$  or 4. In other words, to produce one unit of output, 4 units of capital is needed. Hence, if the capital-output ratio is high, there will not be significant increase in output despite high savings and investment.

## 51. Option (c) is correct.

*Explanation:* Santhals were agricultural people settled in the Rajmahal Hills of Bihar. The British approached them for the expansion of their revenue through agriculture. Santhals agreed to clear forests to practice settled agriculture. A large number of areas were demarcated as Damin-i-Koh or Santhal Pargana in the year 1832. However, gradually the exploitation started from the British side and to such an extent that it gave rise to the Santhal Rebellion. The Santhal Pargana was created after the Santhal Revolt (1855-56) by carving out 5,500 square miles from the districts of Bhagalpur and Birbhum. To protect the economic basis of Santhal society, special regulations governed the transfer of land. It became illegal for a Santhal to transfer land to a non-Santhal.

## 52. Option (c) is correct.

*Explanation:* Economic Impact of British rule:

1. **Deindustrialisation: Ruin of artisans and handicraftsmen:** Cheap and machine made goods imports flooded the Indian market after the Charter Act of 1813 allowing one-way free trade for British citizens. On the other hand, Indian products found it more and more difficult to penetrate the European markets. After 1820, European markets were virtually closed to Indian exports. Even the newly introduced rail network helped the European products to reach the remotest corners of the country.
2. **Impoverishment of Peasantry:** The government was only interested in maximisation of rents and in securing its share of revenue had enforced the Permanent Settlement in large parts.

3. **Development of Modern Industries:**

It was only in the second half of the 19<sup>th</sup> Century that modern machine based industries started coming up in India. The first cotton textile mill was started in 1853 in Bombay by Cowasjee Nanabhoy and the first jute mill came up in 1855 in Rishra (Bengal). But most of the industries were foreign owned and controlled by British managing agencies.

4. **Commercialisation of Indian Agriculture:**

In the latter half of the 19<sup>th</sup> century, agriculture began to be influenced by commercial considerations. Certain specialised crops began to be grown not for consumption in the village but for sale in the national and even international markets. Commercial crops like cotton, jute, groundnut, oilseeds, sugarcane, tobacco, etc. were more remunerative than foodgrains.

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

*Explanation:* Article 356 of the Constitution of India gives the President of India the power to suspend the state government and impose the President's rule in any state in the country. The President Rule will be imposed only when the President is satisfied that a situation has arisen in which the government of the State cannot be carried on in accordance with the provisions of the Constitution.

The President acquires some extraordinary powers when the President's Rule is imposed in a state:

1. He/she can take up the functions of the State government and powers vested in the governor or any other executive authority in the state.
2. It can be declared by the President that the powers of the State legislature are to be exercised by the Parliament.
3. He/she can take all other necessary steps including the suspension of the constitutional provisions relating to any body or authority in the state. The state Governor on behalf of the President, carries on the state administration with the help of the chief secretary of the State or the advisors appointed by the

President. Further, the President either suspends or dissolves the state legislative assembly. The Parliament passes the state legislative bills and the state budget.

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

*Explanation:* Toda tribe of Tamil Nadu intricate Pithukuli work on shawls. The colours of shawls are always red and black and the shawl can be used by both sides. Sujani (also known as Sujini) is a form of embroidery originating from the Bhusura village of Bihar in India.

Uppada jamdani sarees are diaphanous silk sarees.

They are originated from Uppada in Andhra Pradesh. Jamdani itself is a hand-woven fabric that is also known as muslin.

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

*Explanation:* The Global Positioning System (GPS) is a U.S.-owned utility which provides users with positioning, navigation and timing (PNT) services. This system consists of three segments: the space segment, the control segment, and the user segment. Global positioning system applications generally fall into 5 major categories:

1. **Location:** Determining a position
2. **Navigation:** Getting from one location to another
3. **Tracking:** Monitoring object or personal movement
4. **Mapping:** Creating maps of the world
5. **Timing:** Bringing precise timing to the world

GPS's accurate time facilitates everyday activities such as banking, mobile phone operations and even control power grids by allowing well-synchronized hand-off switching.

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

*Explanation:* The Reserve Bank of India was established on April 1, 1935. It was established in accordance with the provisions of the Reserve Bank of India Act, 1934.

The Reserve Bank manages public debt on behalf of the Central and the State Governments. It involves issue of rupee loans, payment of interest, repayment of these loans and other operational matters like debt certificates and their registration.

The borrowing programme is planned taking into account factors such as the amount of Central and State loans maturing during the year, the estimated available resources, market demand for securities in various tenors etc. The RBI is the debt manager for both the Central Government and the State Governments or it can be said that the RBI is the debt manager for India.

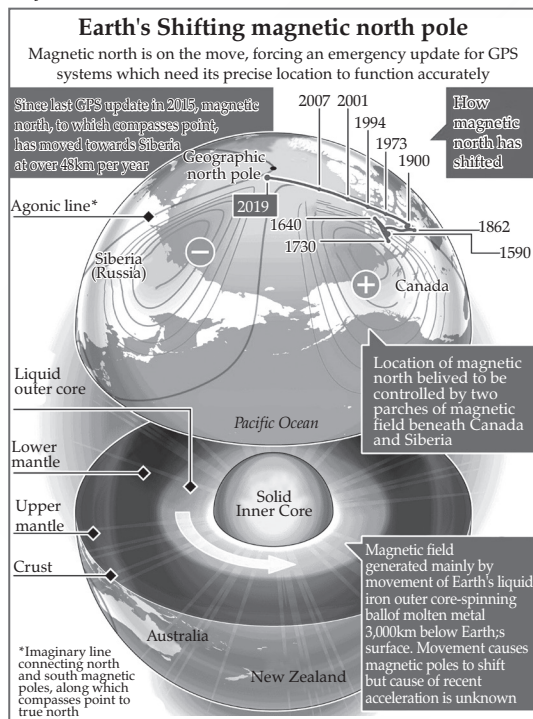
Treasury bills or T-bills, which are money market instruments are short-term debt instruments issued by the Government of India and are presently issued in three tenors, namely, 91 days, 182 days and 364 days. Treasury bills are zero-coupon securities and pay no interest. They are issued at a discount and redeemed at the face value at maturity.

#### Functions of RBI:

It implements and monitors the monetary policy and ensures price stability while keeping in mind the objective of growth. It also regulates and supervise the financial system.

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

**Explanation:**



**Figure: Earth's shifting magnetic north pole.**

The Earth's magnetic field has flipped its polarity many times over the millennia. Magnetic Reversals are not the exceptions

but these are the rules. The Earth has settled in the last 20 million years into a pattern of a magnetic pole reversal about every 200,000 to 300,000 years. About 4.6 billion years ago, during the formation of the earth, the earth had almost no atmosphere. As Earth cooled, an atmosphere formed mainly from gases spewed from volcanoes. It included hydrogen sulfide, methane and 10 to 200 times as much carbon dioxide as today's atmosphere. Living organisms include plants and microbes. Life started to have a major impact on the environment once photosynthetic organisms evolved. While photosynthetic life reduced the carbon dioxide content of the atmosphere, it also started to produce oxygen. So, when living beings originated they did modify the atmosphere.

#### 58. Option (c) is correct.

**Explanation:** The WannaCry ransomware attack was a May 2017 worldwide cyberattack by the WannaCry ransomware cryptoworm which targeted computers running on the Microsoft Windows operating system by encrypting data and demanding ransom payments in the Bitcoin cryptocurrency. It propagated through EternalBlue, an exploit in older Windows systems released by The Shadow Brokers a few months prior to the attack. Petya is a family of encrypting ransomware that was first discovered in 2016. The malware targets Microsoft Windows-based systems. It infects the master boot record to execute a payload that encrypts a hard drive's file system table and prevents Windows from booting. Later, it demands that the user make a payment in Bitcoin in order to regain access to the system.

#### 59. Option (c) is correct.

**Explanation:** Conservation Agriculture minimizes the disruption of the soil's structure, composition and natural biodiversity all forms of conservation agriculture share three core principles. These include: maintenance of permanent or semi-permanent soil cover (using either a previous crop residue or specifically growing a cover crop for this purpose) minimum soil disturbance through tillage (just enough to get the seed into the ground); regular crop rotations to help combat



the various biotic constraints; Conservation Agriculture also uses or promotes where possible or needed various management practices listed below: utilization of green manures/cover crops (GMCC's) to produce the residue cover; no burning of crop residues; integrated disease and pest management; controlled/limited human and mechanical traffic over agricultural soils. When farmers use these conservation agriculture practices, it reduces fossil fuel use and greenhouse gas (GHG) emissions and also reduces the power/energy needs of farmers who use manual or animal powered systems.

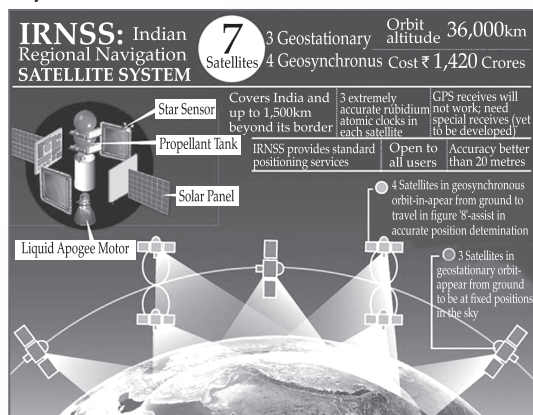
60. **Option (d) is correct.**

**Explanation:** Scientists have warned that the sixth mass extinction of life on Earth is unfolding quickly.

The term "sixth mass extinction/sixth extinction" is often mentioned in the news in the context of the discussion of mankind's over-exploitation/misuse of natural resources, fragmentation/ loss of natural habitats, destruction of ecosystems, pollution and global climate change.

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

**Explanation:**



**Figure: Indian Regional Navigation Satellite System (IRNSS)**

The space segment consists of the IRNSS constellation of seven satellites, (3 GEO and 4 GSO). Three of seven satellites are located in the geostationary orbit and the remaining four are located in the geosynchronous orbits.

The IRNSS is an independent regional navigation satellite system being developed by India. It is designed to provide accurate

position information service to users in India as well as the region extending up to 1500 km from its boundary which is its primary service area. An Extended Service Area lies between the primary service area and area enclosed by the rectangle from Latitude 30° South to 50° North, Longitude 30° East to 130° East. India will have its own satellite navigation system with full global coverage by the middle of 2019.

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

**Explanation:** The theory of relativity states that the massive objects warp the space-time around it. The gravity doesn't directly bend the light by influencing the motion of photons but the space-time around a massive object (a black hole) is warped and light takes the shortest path (which is a little curved), making it look like the black hole is affecting the motion of light.

**Gravitational Time Dilation:** Gravity influences the passage of time. Clocks in the deeper gravitational wells run slower than in general gravitational levels.

The universe is expanding, and parts of it are moving away from Earth.

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

**Explanation:** The Genetically Modified (GM) mustard uses a system of genes from soil bacterium that makes the plant better suited to hybridisation. The GM mustard was developed by Delhi University-based Centre for Genetic Manipulation of Crop Plants (CGMCP) under the leadership of Deepak Pental.

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

**Explanation:** The Belle II experiment is a particle physics experiment. It is designed to study the properties of B mesons (heavy particles containing a bottom quark). Belle II is the successor to the Belle experiment. It is currently being commissioned at the Super KEKB accelerator complex at KEK in Tsukuba, Ibaraki Prefecture, Japan.

The primary use of blockchains today is as a distributed ledger for cryptocurrencies, most notably bitcoin. While a few central banks in countries and regions such as India, China, Hong Kong, United States, Sweden, Singapore, South Africa and the United Kingdom are



studying issuance of a Central Bank Issued Cryptocurrency (CICC).

CRISPR-Cas9 is a genome editing tool. It is short for Clustered Regularly Interspaced Short Palindromic Repeats and CRISPR-associated protein 9.

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

*Explanation:* Carbon fertilisation is the artificial enrichment of the atmosphere of greenhouses with carbon dioxide, an essential nutrient for plants and vegetables. It is also known as Carbon Dioxide Fertilisation. It is used to improve production levels both from a qualitative and from a quantitative point of view. The larger amount of carbon dioxide in the atmosphere that has resulted from rising anthropogenic emissions should help the growth of plants, which use carbon dioxide during photosynthesis. The effect ought to increase crop yields.

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

*Explanation:* The Internet of Things or IoT is like a web of billions of physical devices around the world that are now connected to the internet, collecting and sharing data. These devices can be anything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything. There are many examples for what this might look like or what the potential value might be. Say, for example, you are on your way to a meeting; your car could have access to your calendar and already know the best route to take. If the traffic is heavy, your car might send a text to the other party notifying them that you will be late. What if your alarm clock wakes you up at 6 a.m. and then notifies your coffee maker to start brewing coffee for you.

An IoT device could be as fluffy as a child's toy or as serious as a driverless truck.

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

*Explanation:* Photovoltaics is a method for generating electric power by using solar cells to convert energy from the sun into a flow of electrons. Solar cells produce direct current electricity from sunlight which can be used in electricity generation process.

Photovoltaic (PV) devices generate electricity directly from sunlight using PV cells made up of semiconductors. Photovoltaic devices convert optional radiation into electricity.

Several solar thermal systems can collect and transform radiant energy received from the sun into high-temperature thermal (heat) energy which can be used directly or converted into electricity.

Solar energy can be converted directly into electrical energy (direct current, DC) by photovoltaic (PV) cells commonly called solar cells.

India has a manufacturing base for Solar Thermal technology as well as for Photovoltaics.

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

*Explanation:* Cotton, raw silk, saltpetre, opium were the major commodities exported from Bengal by the English East India Company from Bengal in the middle of the 18<sup>th</sup> century. Opium was a very important staple from Bengal that found a ready market in China.

Bengal also supplied rice, butter, vegetable oils and saltpetre.

Saltpetre was another staple of export which was abundantly produced in the Patna district.

Cotton and silk are the other staple commodities of export by the English East India Company from Bengal in the middle of the 18<sup>th</sup> century.

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

*Explanation:* The Champaran Satyagraha of 1917 was the first satyagraha movement led by Mahatma Gandhi in British India. It was a farmer's uprising that took place during the British colonial period in the Champaran district of Bihar. The farmers were protesting against having to grow indigo with barely any payment for it.

It was the first peasant movement to have garnered nationwide attention. The Champaran Satyagraha yoked the peasant unrest to the freedom struggle. Subsequently, Gandhi's localised movements in Ahmedabad (for mill workers) and Kheda changed the course of Indian national movement. (where he supported distressed peasants).

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

*Explanation:* The working class played a vital role during the freedom movement especially after World War I.

The Hind Mazdoor Sabha was founded in Hawrah on 24 December, 1948 by Socialist, Forward Bloc follower and unionists. Its founders were Ashok Mehta, T.S. Ramanujan and G.G. Mehta. Mr. R.S. Ruikar was elected President and Ashok Mehta as its General Secretary.

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

*Explanation:* Sthanakavasi is a sect of Svetambara Jainism. It was founded by a merchant named Lavaji in 1653 AD. It does not believe in idol worship and says that idol worship is not essential in the path of soul purification and attainment of Nirvana/Moksha. The sect is essentially a reformation of the one founded on the teachings of Lonka (a fifteenth-century Jain reformer).

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

*Explanation:* Buland Darwaza at Fatehpur Sikri is the most iconic architectural accomplishment of Akbar's reign. It incorporates almost all the essential features of Akbar's architectural traditions: red sandstone, stone carvings, relief by inserting white marble etc. Its surface is covered by marble slabs inscribed with Quranic verses promising paradise to true believers, appropriate for the entrance into a khanqah, a complex intended for meditation and devotion. Asafilmambara or Bara Imambara of Lucknow was built to give employment and revenue to the public. The Nawabs used a more economical style in architecture which also gave a touch of lightness to the buildings.

Instead of stones and marble, brick and lime were used. Stucco ornamentation (gajkari) was used to decorate the monuments, giving it a deep relief effect even on flat walls. Rumi Darwaza was the main gateway to the Bara Imambara.

Rumi Darwaza was the main gateway to the Bara Imambara. It was called so because the design of the structure bears resemblance to an ancient gateway at Constantinople. It's also called the "Turkish Gateway". The word Rumi

means Roman, and the name was probably given due to the gateway's design having traces of Roman architecture.

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

*Explanation:* Jean-Baptiste Tavernier (1605–1689), was a 17<sup>th</sup>-century gem merchant and traveller from France. He travelled at his own expense sailed to Persia and India six times between 1630 and 1668 covering 60,000 leagues on his account. He was particularly interested in India's trading conditions and compared it to Iran and the Ottoman empire. The Hope Diamond said to be mined in the Kollur mines in Andhra Pradesh and acquired by French gem merchant, Jean-Baptiste Tavernier in 1666. According to the Smithsonian, Tavernier purchased the 112 3/16 carat diamond who then sold it to French King Louis XIV of France.

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

*Explanation:* The universe of the Great Vehicle contains numerous Bodhisattvas. The chief of whom is Avalokiteshwar ("The Lord who Looks Down"), also called Padmapani ("The Lotus-Bearer") also called Lokesvara in Sanskrit (The Lord of the World). Another important Bodhisattva is Manjusri, whose special activity is to stimulate the understanding. Manjusri is depicted with a naked sword in one hand to destroy error and falsehood. Manjusri also holds a book in the other hand describing the ten paramitas or great spirit.

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

*Explanation:* The British East India Company forced the states into a "subsidiary alliance". According to the terms under the alliance, Indian rulers were not allowed to have their independent armed forces because the company promised to protect them but in exchange of payment for the "subsidiary forces" that the Company was supposed to maintain for the purpose of this protection. If the Indian rulers failed to make the payment for the subsidiary forces then part of their territory was taken away as penalty. During this phase from 1813 to 1857, the British made almost all the Indian States subordinate to their power by compelling them to enter into subsidiary alliances with them. The Indian Princes were put under obligation to accept the British Paramountcy.

Auxiliary conditions

In the fourth and final phase of the subordinate alliance system, Sir Wellesley added the following conditions to the alliance:

- British residents were detained in the courts of native rulers.
- Native rulers were not allowed to hire state citizens who were hostile to Europeans and British.
- Native rulers could not maintain friendly relations with other rulers without the consent of the British.
- The Britishers have agreed to protect the territory of indigenous rulers from foreign aggression and attacks.
- The British agreed not to interfere with the internal affairs of the indigenous rulers.
- The native ruler of the Auxiliary Alliance with the United Kingdom had to accept all of the above conditions and permanently transfer part of his territory to the United Kingdom in the final stages of the Auxiliary Alliance. So this has become a tool for the British to expand control of the company in India.

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

**Explanation: Charter Act of 1813:** The Act incorporated the promotion of knowledge of modern sciences in the country. The Act directed the Company to sanction one lakh rupees annually for this purpose. In 1823, the Governor-General-in Council appointed a "General Committee of Public Instruction". It had the responsibility to grant one lakh of rupees for education. The committee had 10 European members from 2 groups Anglicists and Orientalists. Hence, it promoted both Indian and English education.

**Orientalist-Anglicist Controversy:** The Anglicists argued that the government spending on education should be exclusively for modern studies. The Orientalists said while western sciences and literature should be taught to prepare students to take up jobs, emphasis should be placed on expansion of traditional Indian learning. Even the Anglicists were divided over the question of the medium

of instruction—one faction was for the English language as the medium while the other faction was for Indian languages (vernaculars) for the purpose. Lord Macaulay's Minute (1835), this famous minute settled the row in favour of Anglicists—the limited government resources were to be devoted to teaching of western sciences and literature through the medium of the English language alone.

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

**Explanation:** Lake is a surface water body that is surrounded by land.

Kodaikanal Lake also known as Kodai Lake is a manmade lake.

Important Facts related to Lakes of India:

- Largest freshwater lake in India – Wular Lake, Jammu and Kashmir
- Largest Saline water lake in India – Chilka Lake, Orissa
- Highest lake in India (Altitude) – Cholamu lake, Sikkim
- Longest Lake in India – Vembanad lake, Kerala
- Largest Artificial Lake in India – Govind Vallabh Pant Sagar (Rihand Dam)

Kodai Lake is located in the Kodaikanal city in Tamil Nadu, India.

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

**Explanation:** The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The Short Term Training is expected to benefit candidates of Indian nationality who are either school/college dropouts or unemployed. According to the National Skills Qualification Framework (NSQF), Training Centres shall also impart training in Soft Skills, Entrepreneurship, Financial and Digital Literacy.

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

**Explanation:** Gandhi became the president of the All India Home Rule League in 1920. Its name was changed to 'Swaraj Sabha'.

**Home rule movement:**

Its objective was to establish self-government. Tilak started the movement (confined to Maharashtra and Karnataka) in April 1916



at Belgaum and Annie Besant started the movement (other parts of India) in September, 1916 at Adyar, Madras.

The All India Home league ended in 1920 when it merged into the Indian National Congress.

**Hindu Mahasabha:**

It was established in 1915 to protect the rights of the Hindu community.

It was known previously as the Sarvadeshak Hindu Sabha.

In April 1921 it changed its name to Akhil Bharat Hindu Mahasabha.

**Servants of India Society:**

The Servants of India Society was formed in 1905 by Gopal Krishna Gokhale in Pune, Maharashtra.

Its aim was to build a dedicated group of people for social service and reforms.

**South Indian Liberal Federation:**

It was popularly known as the Justice Party.

It was established on 20 November 1916 by Dr. C. Natesa Mudaliar in Victoria Memorial Hall in Madras.

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

*Explanation:*

1. Swami Dayanand established Arya Samaj - 1875
2. Dinabandhu Mitra wrote Neeldarpan - 1858-59
3. Bankim Chandra Chattopadhyay wrote Anandmath - 1882
4. Satyendranath Tagore became the first Indian to succeed in the Indian Civil Services Examination - 1863

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

*Explanation:* Excessive instream sand-and-gravel mining causes the degradation of rivers. Instream mining lowers the stream bottom, which may lead to bank erosion.

The depletion of sand in the streambed and along coastal areas causes the enlargement of river mouths and coastal inlets and the deepening of rivers and estuaries that may also lead to saline-water intrusion from the nearby sea and pollution of groundwater.

Sand aquifer helps in recharging the water table and sand mining causes sinking of water tables in the nearby areas.

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

*Explanation:* Organic matter affects both chemical and physical properties of the soil and its overall health. The properties of soil are: soil structure; moisture holding capacity; diversity and activity of soil organisms both those that are beneficial and harmful to crop production; and nutrient availability. A high content of organic matter in soil leads to greater pore space with the immediate result that water infiltrates more readily and can be held in the soil. The improved pore space is a consequence of the bioturbating activities of earthworms and other macro-organisms and channels left in the soil by decayed plant roots.

Sulfur is one of three nutrients that are cycled between the soil, plant matter and the atmosphere. The sulfur cycle describes the movement of sulfur through the atmosphere, mineral and organic forms and through living things. Sulfur is released by weathering of rocks and minerals.

Water, temperature and chemical reactions break down minerals releasing their component elements. Once sulfur is exposed to the air, it combines with oxygen and becomes sulfate (SO<sub>4</sub>). Plants and microbes take up sulfate and convert it into organic compounds. As animals consume plants, the sulfur is moved through the food chain and released when organisms and plants die and decompose.

Primary salinization occurs naturally where the soil parent material is rich in soluble salts or in the presence of a shallow saline groundwater table. In arid and semi-arid regions, where rainfall is insufficient to leach soluble salts from the soil or where drainage is restricted, soils with high concentrations of salts ("salt - affected soils") may be formed.

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

*Explanation:* The Partnership for Action on Green Economy (PAGE) was launched in the year 2013. It was a response to the call at Rio+20 to support those countries wishing to embark on green and more inclusive growth trajectories.

It seeks to put the 2030 Agenda for Sustainable Development at the heart of economic policies. The PAGE also seeks to support nations and regions in reframing economic policies and practices around sustainability or Sustainable Development Goals.

The PAGE brings together five UN agencies – UN Environment, International Labour Organization (ILO), UN Development Programme, UN Industrial Development Organization and UN Institute for Training and Research.

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

**Explanation:** 3D printing or additive manufacturing is a process of making three-dimensional solid objects from a digital file. A three-dimensional printed object is created by laying down successive layers of material until the object is created. Every layer in the object can be seen as a thinly sliced horizontal cross section.

**Application of 3D printing:**

Recently, 3D printed food restaurant has come up in Netherlands.

In America, 3D printed bionic ear was generated via 3D printing of a cell-seeded hydrogel matrix in the anatomic geometry of a human ear.

The 3D printing is being used in the preparation of confectionery items, manufacturing of bionic ears, automotive industry, reconstructive surgeries and data processing technologies, etc.

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

**Explanation:** The Barren Island is the only active volcano in the Indian territory and located 140 kms to the east of Port Blair in the South Andaman.

The Great Nicobar is the southernmost region of Andaman & Nicobar. It lies in the south of Port Blair.

This volcano had been lying dormant for more than 150 years until it saw a major eruption in 1991. Since then it has shown some intermittent activity, including eruptions in 1995, 2005 and 2017.

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

**Explanation:**



**Figure: Prosopis juliflora**

*Prosopis juliflora* was introduced in India to restore degraded lands and to meet the requirement of fuel and wood of the rural poor and.

It is a native of the South and Central America. In a recent study, it has shown up that it threatens local plants with whom it competes for resources and also affecting the nesting success of birds.

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

**Explanation:** Most of the coral reefs in the world are located in tropical shallow waters less than 50 meters deep. In the western regions of the Indian ocean, the Pacific Ocean and the Greater Caribbean.

Global distribution of corals are - Australia-17%, Indonesia-16%, Philippines-9% (more than one-third of the world's corals).

32 of the 34 recognised animal Phyla are found on coral reefs compared to only 9 Phyla in tropical rainforests.

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

**Explanation:** The UNFCCC secretariat launched its Climate Neutral Now initiative in the year 2015. Next year, it launched a new pillar under its Momentum for Change Initiative focused on Climate Neutral Now.

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

**Explanation:** In 1791, Jonathan Duncan started the Sanskrit College at Benares. Warren Hastings established Calcutta Madrasa in 1781 for the study of Muslim law and related subjects. Lord Richard Wellesley set up the

Fort William College in 1800. It was established for training of civil servants of the Company in languages and customs of Indians.

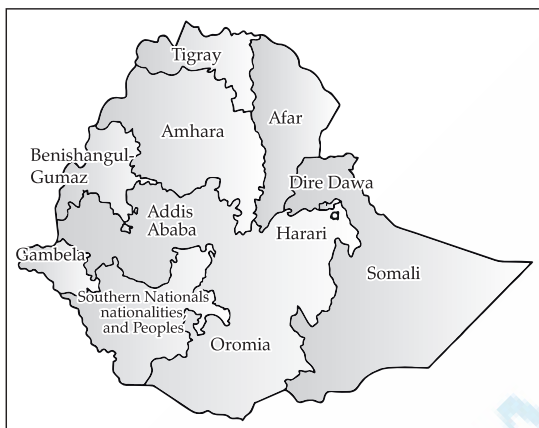
90. Option (c) is correct.

*Explanation:*



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

Figure: Map of Mindanao, Philippines



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

Figure: Map of Oromia, Nigeria

Catalonia is a semi-autonomous region in North-East Spain.

Crimea was earlier part of Ukraine but currently under the control of Russia.

Mindanao is a region of Philippines.

Oromia is in Ethiopia and has been in news for ethnic clashes.

91. Option (b) is correct.

*Explanation:* On August 1, 1953 Air India was nationalised and becomes India's national carrier. On July 1, 1955 India's largest bank, the Imperial Bank of India renamed as State Bank of India. The first democratically elected Communist Party established its government in Kerala on April 5, 1957.

On December 19, 1961, Goa was officially ceded to India after 400 years of Portuguese rule.

92. Option (c) is correct.

*Explanation:* The SC stated in the case of *KS Puttaswamy and others vs Union of India and others* that 'Right to Privacy' is an integral and an important part of the Right to Life and Personal Liberty. It is guaranteed under Article 21 of the Constitution.

It added that the right to privacy is intrinsic to the entire fundamental rights chapter of the Constitution.

93. Option (b) is correct.

*Explanation:* The MSP is fixed on the recommendations of the Commission for Agricultural Costs and Prices (CACP). The CACP is a statutory body. It submits separate reports recommending prices for Kharif and Rabi seasons. Initially MSP covered paddy, rice, wheat, jowar, bajra, maize, ragi (Finger Millet), barley, gram, tur, moong, urad, sugarcane, groundnut, soybean, sunflower seed, rapeseed and mustard, cotton, jute and tobacco.

From 1994-95 onwards, Nigerseed and Sesame were included under the MSP Scheme of CACP, in addition to the edible oilseeds already covered by the Commission. Similarly, during the year 2001-2002, the government enhanced the terms of reference of the Commission by including lentil i.e masur.

94. Option (a) is correct.

*Explanation:*



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

Figure: Map of wildlife sanctuary in India



Pakhui is a Wildlife Sanctuary and a dedicated Tiger Reserve also known as the Pakke Tiger Reserve. It is situated in the district of East Kameng in Arunachal Pradesh, India. It has an area of over 860 square kilometres and is bordered by the Kameng River and Pakke River which are important sources of water for animals and the irrigation of the vegetation.

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

**Explanation:** Both PSLV (Polar Satellite Launch Vehicle) and GSLV (Geosynchronous Satellite Launch Vehicle) are the satellite-launch vehicles (rockets) developed by ISRO. PSLV is designed mainly to deliver the "earth-observation" or "remote-sensing" satellites. Its lift-off mass is up to about 1750 Kg to Sun-Synchronous circular polar orbits. The PSLV is also used to launch the satellites of lower lift-off mass of up to about 1400 Kg to the elliptical Geosynchronous Transfer Orbit (GTO).

The GSLV is designed to deliver the communication satellites to the highly elliptical, typically  $250 \times 36000$  Km Geosynchronous Transfer Orbit (GTO).

PSLV (Polar Satellite Launch Vehicle) is an indigenously developed expendable launch system of the ISRO (Indian Space Research Organization). It comes in the category of medium-lift launchers with a reach up to various orbits including the Geo Synchronous Transfer Orbit (GTO), Lower Earth Orbit (LEO), and Polar Sun Synchronous Orbit.

GSLV Mk III is a three staged heavy lift launch vehicle. It is developed by ISRO. It has two solid strap-ons, a core liquid booster and a cryogenic upper stage.

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

**Explanation:** Capital infusion by the Government of India into public sector banks has not steadily increased in the last decade.

The merger of SBI associated banks has been done under Section 35 of the State Bank of India Act, 1955. It will result in the creation of a stronger merged entity and minimize vulnerability to any geographic concentration risks faced by subsidiary banks. It will also result in improved risk management, improved operational efficiency and unified treasury operations.

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

**Explanation:** The Goods and Services Tax (GST) in India was implemented on July 1, 2017. Cereals, eggs, fish etc. are exempted from GST, while the question mentions 'cooked' and 'processed' which in all likelihood will be available at restaurants and factories, these are therefore not exempted from the purview of GST. With reference to newspapers containing advertisements, the government has recently published a clarification that these will be taxed under GST.

The newspaper would have to pay 5% GST on the revenue earned from space selling.

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

**Explanation:** The phrase 'critical wildlife habitat' is defined only in the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (also known as the Forest Rights Act). The government of Madhya Pradesh for the first time recognised the habitat rights of seven villages in Dindori district mostly inhabited by the Baigas. Under the act, the District Level Committee shall ensure that all Particularly Vulnerable Tribal Groups (PVTGs) receive habitat rights. These rights can be given in consultation with the concerned traditional institutions of Particularly Vulnerable Tribal Groups and their claims for habitat rights are filed before the concerned Gram Sabhas.

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

**Explanation:** Natural agencies like wind, water, animals, insects, mites, nematodes, birds etc. are the different methods of indirect transmissions of pathogens causing plant disease.

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

**Explanation:** The Ministry of Commerce has implemented the National Programme for Organic Production (NPOP) since 2001. Agricultural and Processed Food Products Export Development Authority (APEDA) functions as the Secretariat for the implementation of the NPOP.

By implementing organic practices on around 75,000 hectares of agricultural land, Sikkim has become India's first fully organic state in 2016.