

HINTS & SOLUTION

1. (c) Statement (1) is incorrect. The correct minimum age requirement for a Governor in India is 35 years, not 30 years.
2. (a) The repo rate is the rate at which other banks borrow from the Reserve Bank of India: This statement is correct. The repo rate is indeed the rate at which the Reserve Bank of India (RBI) lends money to commercial banks in the event of any shortfall of funds. A value of 1 for the Gini Coefficient in a country implies that there is perfectly equal income for everyone in its population: This statement is incorrect. The Gini Coefficient ranges from 0 to 1, where 0 represents perfect equality (everyone has the same income) and 1 represents perfect inequality (one person has all the income and everyone else has none). Therefore, statement 1 is correct, and statement 2 is incorrect.
3. (a) Appointing the chief minister and other ministers: This is generally not a discretionary power. The Governor usually acts on the advice of the Chief Minister or the majority party in the legislature. However, in certain situations, such as when no party has a clear majority, the Governor may have some discretion. Recommendation for the imposition of the President's Rule in the state: This is a discretionary power. The Governor can send a report to the President recommending President's Rule if they believe that the state government cannot function according to the provisions of the Constitution. Promulgating ordinances when the state legislature is not in session: This is not a discretionary power. The Governor acts on the advice of the Council of Ministers headed by the Chief Minister when promulgating ordinances. Seeking information from the chief minister with regard to the administrative and legislative matters of the state: This is a regular function of the Governor and is not considered a discretionary power.
4. (c) Ministry of Culture launched the Swadesh Darshan Scheme for integrated development of theme-based tourist circuits in the country: This statement is incorrect. The Swadesh Darshan Scheme was actually launched by the Ministry of Tourism, not the Ministry of Culture. This scheme is envisioned to synergize with other Government of India schemes like Swachh Bharat Abhiyan, Skill India, Make in India: This statement is correct. The Swadesh Darshan Scheme is designed to align with other government initiatives to promote holistic development. Development of Chitrakoot and Shringverpur is part of the Krishna Circuit: This statement is incorrect. Chitrakoot and Shringverpur are part of the Ramayana Circuit, not the Krishna Circuit.
5. (c) It has been launched by the Ministry of Defence: This statement is incorrect. The NABH Nirman Initiative is not launched by the Ministry of Defence. It is an initiative under the Ministry of Civil Aviation. It exclusively envisages providing connectivity to unserved and underserved airports of the country through the revival of existing airstrips and

- airports: This statement is incorrect. While the initiative does focus on improving airport infrastructure, the exclusive focus on unserved and underserved airports through the revival of airstrips is more aligned with the UDAN (Ude Desh ka Aam Nagrik) scheme. This scheme constitutes investments to be made in airport upgrades by the private sector: This statement is correct. The NABH Nirman Initiative includes plans for significant investment in upgrading and expanding airport infrastructure, including involvement from the private sector. Therefore, only statement 3 is correct.
6. (b) P2P lending platforms are treated as Non-Banking Financial Companies: This statement is correct. P2P lending platforms are regulated by the Reserve Bank of India (RBI) as Non-Banking Financial Companies (NBFCs) under the category of Non-Banking Financial Company - Peer to Peer Lending Platform (NBFC-P2P). It is regulated by the Securities and Exchange Board of India: This statement is incorrect. P2P lending is regulated by the Reserve Bank of India (RBI) and not by the Securities and Exchange Board of India (SEBI). It is a form of crowdfunding used to raise loans which are paid back with interest: This statement is correct. P2P lending involves individuals lending money to other individuals or businesses through online platforms, and the loans are repaid with interest. Therefore, statements 1 and 3 are correct.
7. (d) The Suresh Mathur Committee, formed by the Insurance Regulatory and Development Authority of India (IRDAI), is tasked with reviewing and recommending measures to improve and enhance the micro insurance framework in India.
8. (a) An award made by a Lok Adalat is indeed deemed to be a decree of a Civil Court. This is because, under the Legal Services Authorities Act, 1987, the awards made by Lok Adalats are given the status of civil court decrees. The award of a Lok Adalat is final and binding on all parties, and no appeal lies against it before any court. This is true because the purpose of Lok Adalats is to provide a speedy and final resolution to disputes, and their decisions are meant to be conclusive and non-appealable. Thus, both the assertion and the reason are true, and the reason correctly explains the assertion.
9. (b) The Estimates Committee is the largest committee of the Parliament in terms of membership. It consists of 30 members and is responsible for examining the estimates of expenditure and ensuring that they are in line with the government's objectives.
10. (a) Amendment of the Constitution - Canada. Directive Principles - Ireland. Emergency Power of the President - South Africa. The Union-State relations - Germany
11. (a) Statement (1) is not correct. Foreigners working in Indian Embassies are considered residents of the country where the embassy is located, not India.
12. (c) The Ministry of Finance is responsible for formulating and implementing fiscal policy in India.

13. (c) Mining and quarrying - Although these activities are essential for providing raw materials, they are generally classified under the primary sector.
14. (b) Corporation tax, also known as corporate income tax, is levied by the Central Government of India.
15. (c) India follows a managed float system where the exchange rate is determined largely by market forces, but the Reserve Bank of India (RBI) intervenes occasionally to stabilize the currency or prevent excessive fluctuations.
16. (d) According to Article 75(5) of the Indian Constitution, a Prime Minister must be a member of either House of Parliament, and if they are appointed from the Upper House, they must be elected to the Lower House (Lok Sabha) within six months of their appointment as Prime Minister.
17. (a) A Money bill can be introduced only in LS (not in RS) that too on the recommendation of the President.
18. (a) Article 16(2) of the Indian Constitution is part of the Fundamental Rights, which ensures equality of opportunity in matters of public employment.
Article 29(2) of the Indian Constitution is a part of the provisions that protect cultural and educational rights
Article 30(1) of the Indian Constitution is part of the rights provided to minorities in India to preserve their culture and education.
- Article 31(1) of the Indian Constitution, as it originally stood, was part of the Right to Property under the Fundamental Rights.
19. (a) Elections in India are conducted according to the constitutional provisions, supplemented by laws made by Parliament. The major laws are Representation of the People Act, 1950, which mainly deals with the preparation and revision of electoral rolls, the Representation of the People Act, 1951 which deals, in detail, with all aspects of conduct of elections and post-election disputes.
20. (a) The High Court (and not the Election Commission) is the final authority to give a final verdict in case of election disputes. In the alternative special election benches may be constituted in high courts and earmarked exclusively for the disposal of election petitions and disputes.
21. (b) The Chief Election Commissioner and other Election Commissioners enjoy equal powers and salaries. The term of office of the Election Commissioner is 6 years or till he attains the age of 65 years or whichever is earlier..
22. (a) Statement 1 is correct as under Article 360, any Proclamation of Financial Emergency issued shall cease to operate at the expiration of two months, unless before the expiration of that period it has been approved by the resolutions of both Houses of Parliament. If approved by both Houses, then it operates for 6 months..

23. (c) The Water (Cess) Act, 1977 related to water and irrigation and not the protection of environment.
24. (b) Assertion and Reason as independent statements are true but does not explain each other..
25. (b) The average fixed cost (AFC) is calculated by dividing the total fixed cost by the quantity of output produced. Since the total fixed cost remains constant regardless of output, the average fixed cost decreases as output increases.
26. (d) Brent Crude is a major trading classification of sweet light crude oil that serves as a major benchmark price for purchases of oil worldwide. Brent Crude is extracted from the North Sea and comprises Brent Blend, Forties Blend, Oseberg and Ekofisk crudes .The Brent Crude oil marker is also known as Brent Blend, London Brent and Brent petroleum. The index represents the average price of trading in the 25 day Brent Blend, Forties, Oseberg, Ekofisk (BFOE) market in the relevant delivery month as reported and confirmed by the industry media.
27. (c) Deflation is defined as a fall in the general price level of goods and services. It is a negative rate of inflation. It means the value of money increases rather than decreases.
28. (b) When total product begins to decline, marginal product is negative.
29. (a) Correct chronological order of the Vice-Presidents of India is as follows: V.V
- Giri – 1967 ; G.S Pathak 1969 ; B.D Jatti- 1974 ; M Hidayatullah- 1979
30. (b) All these conditions are valid and they are specified in Articles 102(1) and 191(1) of the Constitution of India.
31. (a) Mangroves are found in the bordering region of tropical and sub-tropical sea coast. Mangroves stabilise the shoreline and act as bulwark against sea erosion which make the specialised forest ecosystem.
32. (d) Due to the monsoon drift of Indian ocean, its regular direction of the ocean currents changes twice an year.
33. (a) Andes is marked as '1', which is located at the western coast of South America. Brazilian shield is marked as '2', this area is located at the eastern part of South America. The shield extends over 8.5 million square. Guyana highland is marked as '3' Guyana highland is a plateau and low mountain region of South America located north of Amazon river and South of Orinoco river. Amazon basin is marked as '4', it is the tropical rain forest in the world. Amazon river drains more than half of Brazil, part of Bolivia, Peru and Ecuador.
34. (d) Cedar is found in Canada, Douglas fir is found in Mexico, Mahogany is found in Myanmar. Teak is found in Honduras..
35. (a) A' marked city in map is Darwin in Australia. 'B' marked city in the given map is Kuala Lumpur in Malayasia. 'C' marked city in map is Nairobi in Kenya. The city marked 'D' in the map is Lagos in Nigeria.

36. (b) The Palk strait separates India and Srilanka. It lies between the Gulf of Mannar and the Bay of Bengal.
37. (d) Rabi crops are grown during the winter season, typically from October to March. They are sown after the monsoon season and harvested in the spring. The common Rabi crops include wheat and mustard.
38. (c) India is a significant producer and exporter of sesame seeds, but it competes closely with countries like Sudan, Myanmar, and Tanzania, which are also top producers. India remains a significant player but is not always the top producer or exporter each year
39. (a) Both the assertion and the reason are true. The reason correctly explains why the southern part of India lies within the tropics and the northern part lies in the warm temperate zone.
40. (c) The Great Himalayan Range, also known as the Himadri, is considered the oldest part of the Himalayan mountain system. It is the highest and northernmost range, consisting of some of the world's tallest peaks, including Mount Everest and Kanchenjunga. This range formed before the other parallel fold ranges like the Lesser Himalayas and the Siwalik Range.
41. (b) The decreasing order of arrangement of continent according to the percentage of Earth's land is Africa (29800000 sqkm), North America (21510000 sqkm) South America (17598000 sqkm) and Europe (9699550 sqkm).
42. (d) Bangalore receives lesser rainfall than Mangalore. Mangalore is located in windward slope and receives 2000 mm of rainfall, whereas Bangalore present in rain shadow area receives less than 500 mm of water.
43. (a) West flowing rivers Narmada and Tapi do not form delta, because topography of western peninsular India is rocky without loose sediments and no alluvial sediments carried by the rivers.
44. (b) Gopinath Beach – Gujarat; Lawsons Bay Beach – Andhra Pradesh; Devbagh Beach – Karnataka; Sinquerin Beach - Goa.
45. (a) Statement (a) is incorrect. High tides are generally more pronounced in gulfs or bays with wider fronts and narrower rears. This is due to the funnelling effect, where the narrowing of the bay increases the height of the incoming tide.
46. (c) The English East India Company was granted permission to establish a factory at Surat in 1613 during the reign of Emperor Jahangir.
47. (b) Narasimhadeva I was a ruler of the Eastern Ganga dynasty, also known as the Imperial Ganga dynasty, which ruled over Kalinga (modern-day Odisha) in eastern India.
48. (c) The Patimokkha (Pali) or Pratimoksha (Sanskrit) refers to a set of rules governing the conduct of monks and nuns within the Buddhist monastic community, known as the Sangha.

49. (a) 1st session – Bombay (Womesh Chandra Banerjee); 2nd session – Calcutta (Dadabhai Naoroji); 3rd session – Madras (Badruddin Tyabji); 4th session – Allahabad (George Yule).
50. (a) Statement (1) is not correct because Sher Shah Suri maintained the traditional village Panchayats and local Zamindars and allowed them to handle minor civil and criminal cases. Statement (2) is correct.
51. (c) Fa-Hien, a Chinese Buddhist monk, travelled to India in the early 5th century during the reign of the Gupta Empire. His primary objective was to visit Buddhist sites, study the practices, and collect Buddhist scriptures..
52. (b) The five principles of peaceful co-existence, known as Panchsheel, as outlined by Jawaharlal Nehru are “Mutual respect for each other's territorial integrity and sovereignty, non-aggression, non-interference, equality and mutual benefit, and peaceful co-existence.” These principles were formulated in 1954 in an agreement between India and China..
53. (b) After the death of Raja Rammohan Roy, the Brahma Samaj split into two sections. The Brahma Samaj of India was led by Keshab Chandra Sen, a prominent social reformer known for his progressive ideas. On the other hand, Debendranath Tagore, who emphasized traditional Brahma values, led the Adi Brahma Samaj.
54. (d) Kochi, historically known as Cochin, experienced successive colonial occupations over the centuries. Initially, the Portuguese established control over Kochi in the early 16th century, using it as a strategic trading hub. However, in 1663, the Dutch East India Company defeated the Portuguese and took over Kochi, establishing their own dominance in the region. The Dutch held sway over Kochi for several decades, influencing its trade and governance. Later, during the Napoleonic Wars in the late 18th century, the Dutch temporarily ceded Kochi to the British in 1795. Eventually, under the Treaty of Amiens in 1802, the Dutch formally transferred Kochi to British control, marking the beginning of British rule in the region until India gained independence in 1947.
55. (b) Kitab-Ul-Hind was written by Al Biruni. Ibn Batuta is known for his extensive travels, accounts of which were published in the Rihla . In 1332, Ibn Battuta decided to go to India. He was greeted openheartedly by the Sultan of Delhi. There he was given the job of a judge. He stayed in India for a period of 8 years and then left for China.
56. (c) Statement (2) is incorrect. Cornwallis' reforms were primarily focused on the separation of revenue administration from the administration of justice, rather than on the principle of separation of powers, which typically refers to the separation between the executive, legislative, and judicial branches of government.
57. (d) Ashoka was responsible for building many stupas all over northern India and the other territories under the Mauryan Dynasty in areas now known as Nepal, Pakistan, Bangladesh, and Afghanistan.

Ashoka also built stupas in regions where the people might have difficulty reaching the stupas that contained the Buddha's ashes. Stupas were also built in rural areas.

58. (b) Statement (1) is incorrect. Banda Bahadur was actually appointed as the military leader of the Sikhs by Guru Gobind Singh, not Guru Tegh Bahadur.
59. (a) The correct chronological order in which these historical sites were built is as follows: Qutub Minar - Built by Qutb-ud-din Aibak in the early 13th century (around 1192-1220 AD). Tughlaqabad Fort - Built by Ghiyas-ud-din Tughlaq in 1321 AD. Fatehpur Sikri - Built by Akbar the Great, construction started in 1571 AD. Lodi Garden - Contains tombs and structures from the Lodi period, which ruled from the late 15th to the 16th century.
60. (b) These terms typically referred to administrative or leadership roles within local governance structures, particularly in the context of village administration.
61. (d) Satya Sodhak Samaj was founded by Jyoti Ba Phule in 1873..
62. (d) Butler Committee - Relation between Indian states & paramount power. Hurtag Committee - Growth of British India education-its effects. Hunter Commission - Jallianwalabagh massacre. Muddiman Committee - Working of Diarchy as in Montague Chelmsford reforms
63. (d) Poona Pact was signed by Ambedkar on behalf of the depressed classes in September, 1932. The pact abandoned separate electorates for the depressed classes. But the seats reserved for the depressed classes were increased both in provincial and state legislatures.
64. (c) The statement (3) is incorrect. While Clive did attempt to regulate and curb some of the abuses by the Company's servants, including the rampant corruption and private trade, his efforts were not entirely successful, and private trade by Company servants continued.
65. (b) The status of women was redefined. They were entitled to formal education and hence there were women teachers, philosophers and doctors. Early marriage was prohibited by law and they were given the right to property.
66. (c) Steam burns are more serious than burns from boiling water even though both are at 100°C because when steam condenses it give up very high heat energy i.e. additional 22.6×10^5 joule of heat (latent heat of vaporisation) compared to boiling water..
67. (d) To keep the outside heat away, windows of double osmosis i.e. flow of water from higher concentration pane glass with air in between is the best choice to lower concentration through a semi-permeable because air is the bad conductor of heat.
68. (b) X-rays cannot be deflected by magnetic field as they consists of no charge. X-rays and UV rays are electromagnetic wave, so they move with same velocity in vacuum i.e. 3×10^8 m/s

69. (c) Motion of an oscillating liquid column in a U-tube is called simple harmonic motion with time period independent of on the density of the liquid.
70. (c) Maximum n of electrons in K,L, M and N is 2, 8, 18 and 32 respectively.
71. (d) $R = P \frac{l}{A}$ The new resistance will be $\frac{R}{4}$ and resultant resistance will be $R/5$.
72. (d) When a parachutist jumps from a height, its speed first increases with the distance fallen and then becomes constant..
73. (c) The bob of a simple pendulum is attached to a string which pulls the bob along its length.
74. (d) The reason CDs reflect rainbow colours is because they have a clear plastic coating on top of a mirrorized surface. Light refracts (bends) when it moves from one medium (such as air) to another with a different optical density (such as the clear plastic surface of a CD). Different wave lengths of light (every colour has a different wave length) travel at different speeds, so that full spectrum appears when white light passes from the air through the plastic surface of a CD, separated light rays which are then reflected back to us by the mirrorized center surface of a CD. Here the diffraction and transmission also takes place because diffraction of light rays occur when it strikes the surface of CD and transmission is obvious when light enters from one medium to another. The thickness of the different optical media, angle of source light, and brightness of source light all affect which rainbow patterns are visible on a CD.
75. (a) A metallic conductor has a large number of free electrons in it. When a potential difference is applied across the ends of a metallic wire, the free electrons begin to drift from a region of low potential to a region of high potential. These electrons collide with the positive ions (the atoms which have lost their electrons). In these collisions, the energy of the electron is transferred to the positive ions and they begin to vibrate more violently. As a result, heat is produced. The greater the number of electrons flowing per second, the greater will be the rate of collisions and so greater is the heat produced.
76. (b) Frequency modulation is a process in which the frequency of the carrier is varied in accordance with the instantaneous value of modulating voltage. In telecommunications and signal processing, frequency modulation (FM) conveys information over a carrier wave by varying its instantaneous frequency. FM is most commonly used for radio and television broadcasting.
77. (a) Nickel-cadmium (Ni-Cd) batteries use nickel oxyhydroxide (NiOOH) as the positive electrode (cathode) and cadmium (Cd) as the negative electrode (anode). These batteries are rechargeable and commonly used in portable devices like torchlights and electric shavers due to their reliability, durability, and ability to deliver consistent power. The chemical reactions during charging and discharging allow these batteries to be reused many times, making them a cost-effective power source for various applications..

78. (a) Ammonia is used as a large scale refrigerant because it has highest refrigerating capacity per pound of any refrigerant and a number of other excellent thermal properties that make it popular for a number of refrigeration applications in spite of its being toxic, explosive and flammable within certain conditions. Ammonia is used as refrigerant prominently in the refrigeration systems of food industry like dairies, ice creams plants, frozen food production plants, cold storage warehouses, processors of fish, meat and number of other applications. Comparatively chlorofluorocarbon (CFC) chemical, safer refrigerators were possible for home and consumer use.
79. (a) Potassium bromide is used in photography as a restrainer in black and white developer formulas. Gun powder, also called black powder, is a mixture of sulphur, charcoal, and potassium nitrate. Gun powder can be made by just using potassium nitrate and charcoal (or alternatively without charcoal), but without the sulphur (or coal), the powder is not as strong.
80. (c) Bagasse is often used as a primary fuel source as it produces sufficient heat energy. Molasses can be used for the production of Ethanol. Ethanol is produced by the age old technique of fermentation of cereals, grams, molasses and other materials with high starch contents. Molasses is an inexpensive and readily available raw material. It cannot be used as a synthetic fertilizer as molasses contain calcium, magnesium and Iron where as synthetic fertilizers are comprised of NPK i.e. Nitrogen, Phosphorous and Potassium
81. (c) Plaster of Paris, which is chemically calcium sulphate hemihydrate, sets through a hydration reaction. When mixed with water, it reacts to form calcium sulphate dihydrate, commonly known as gypsum. This process involves the absorption of water and results in the hardening of the material.
82. (d) Ice is less dense than liquid water, which is why ice floats on water. The hydrogen bonding in ice creates a lattice structure that is less dense than the random arrangement of molecules in liquid water.
83. (d) Acetylene (C_2H_2) is commonly used in gas welding due to its high flame temperature when combined with oxygen. This combination produces a flame that can reach temperatures up to around $3,500^\circ C$ ($6,330^\circ F$), making it suitable for welding and cutting metals.
84. (d) Aspartame is metabolized by the body into two constituent amino acids and methanol. These hydrolysis products are handled by the body in the same way as aspartic acid, L-Phenylalanine and methanol from other consumed foods. These components yield NO calory and add nothing new to the diet.
85. (b) Common fertilizers primarily contain three essential nutrients: nitrogen (N), phosphorus (P), and potassium (K). Nitrogen is crucial for promoting vigorous leaf and stem growth, making it vital for the overall vegetative development of plants. Phosphorus supports the development of strong roots and is also important for flowering and fruiting

processes. Potassium enhances overall plant health, improves resistance to diseases, and aids in the efficient utilization of water.

86. (b) Diamond is significantly harder than graphite due to its unique tetrahedral structure. In diamond, each carbon atom is covalently bonded to four other carbon atoms, forming a strong and rigid three-dimensional lattice. This extensive network of strong covalent bonds throughout the entire structure makes diamond extremely hard and durable. In contrast, graphite consists of carbon atoms bonded in planar hexagonal layers, with each carbon atom bonded to three others. These layers are held together by weak van der Waals forces, allowing them to slide over each other easily, which makes graphite soft and slippery. Therefore, the tetrahedral structure of diamond is the key reason for its superior hardness compared to the layered structure of graphite.
87. (b) Radiocarbon dating (usually referred to as simply carbon dating) is a radiometric dating method that uses the naturally occurring radioisotope carbon-14 (^{14}C) to estimate the age of carbon-bearing materials up to about 58,000 to 62,000 years.
88. (b) In chemistry and physics, the Avogadro constant is defined as the number of constituent particles (usually atoms or molecules) in one mole of a given substance. It has dimensions of reciprocal mol and its value is equal to 6.023×10^{23} .
89. (d) As per the Law of Mass Action, if K_1 is the equilibrium constant for the equation $A+B \rightleftharpoons C+D$ then $1/K_1$ is the equilibrium constant for the reverse equation $C+D \rightleftharpoons A+B$. So, as per the question K_1 is the equilibrium constant for $\text{H}_2 + \text{I}_2 \rightleftharpoons 2\text{HI}$, then $1/K_1$ is equilibrium constant for the reverse equation $2\text{HI} \rightleftharpoons \text{H}_2 + \text{I}_2$
90. (c) Isotopes of an element have the same number of protons, which means they have the same atomic number. However, they have different numbers of neutrons, resulting in different atomic masses. The atomic number defines the element, while the atomic mass varies due to the different numbers of neutrons in the isotopes.
91. (a) Adequate ventilation is crucial for maintaining good indoor air quality and ensuring that individuals have sufficient fresh air to breathe. The figure of 1000 cubic feet of air every 20 minutes is commonly cited in various health and safety guidelines to ensure adequate oxygen supply and removal of carbon dioxide and other contaminants.
92. (b) Yawning is believed to be triggered by the body's attempt to increase oxygen intake and reduce carbon dioxide levels in the blood. When the levels of CO_2 rise, it prompts a deep inhalation through yawning to increase the intake of oxygen and help expel the excess CO_2 from the lungs.
93. (c) Ginger is considered a stem, specifically a rhizome, because it exhibits the characteristics of a stem, such as the presence of nodes and internodes. Nodes are the points on a stem where leaves and buds arise, while internodes are the

- segments of the stem between the nodes.
Roots do not have these features.
94. (c) Weak sight – Vitamin A ; Anaemia – Iron; Skin problem – Vitamin C; Weak bones - Calcium.
95. (b) Antibiotics are substances produced by microorganisms, such as bacteria or fungi, that inhibit the growth of or kill other microorganisms. They are used in medicine to treat bacterial infections. For example, penicillin, the first widely used antibiotic, is produced by the mold *Penicillium*.
96. (c) Charles Darwin's theory of natural selection suggests that traits that provide a survival advantage are more likely to be passed on to future generations. In the case of giraffes, individuals with longer necks could reach higher leaves on trees, giving them a better chance of survival during times when food is scarce. These giraffes would be more likely to reproduce and pass on their long-neck trait to their offspring.
97. (c) Assertion is true because unsaturated fats are more reactive compared with saturated fats due to multiple bonds present between carbon atoms. The reason is false because unsaturated fats have at least double bond in their structure..
98. (d) Crop rotation, Sand fences, terracing and wind breaks all are used for sand conservation in India. Sand fences is a simple and cheap method of inducing accretion of sands in arid and sandy areas.
99. (c) We can draw the inference that processed meat is always packed in sealed tins.
- 100.(a) Ptyalin – It is present in saliva that catalyzes the hydrolysis of starch into maltose and dextrin. Pepsin – It is an enzyme released in stomach that degrades food proteins into peptides. Renin – It is an enzyme that is present in kidney and it converts angiotensinogen into angiotensin balancing sodium and potassium level in blood. Oxytocin – It is a sex hormone that plays a role in sexual reproduction. It induces contraction of smooth muscles.
- 101.(b) A nephron consists of a network of tiny blood vessels, the glomerulus surrounded by Bowman's capsule. Pressure forces much of the blood plasma through the glomerulus and into Bowman's capsule. The resulting tubular fluid, which contains water and dissolved chemicals then passes into convoluted tubule and loop of Henle. This capillary network provides a mean for pick up and delivery of materials that are reabsorbed and secreted by the kidney.
- 102.(d) Colour blindness is an X-linked recessive trait, meaning the gene responsible is located on the X chromosome. A colourblind woman (XcXc) and a non-colourblind man (XY) will pass their X chromosomes to their children. Sons inherit their X chromosome from their mother and their Y chromosome from their father, resulting in a genotype of XcY, so the son will be colourblind. Daughters inherit one X chromosome from each parent, resulting in a genotype of XcX. Since they have one normal X chromosome from their father, daughters

will not suffer from colour blindness but will be carriers. Thus, the son will suffer from colour blindness while the daughter will not.

103.(b) the blue whale (*Balaenoptera musculus*) holds the title of the largest mammal on Earth. Adult blue whales can reach lengths of up to 100 feet (30 meters) and can weigh as much as 200 tons.

104.(d) World Environment Day (5th June); World Forestry Day (20th March); World Habitat Day (3rd October) World Ozone Day (16th September).

105.(c) As per the human development index ranking given by UNDP, the correct sequence is Sri Lanka – Bhutan – Nepal - Pakistan.

106.(c) Statement (1) is not correct. The charter of UNO was adopted at San Francisco in June 1945.

107.(b) Karachi was the capital of Pakistan from 1947 – 1959. Kyoto was the capital of Japan before Tokyo. Brisbane was the capital of Australia before Canberra in 1842 – 1859.

108.(d) Chakiarkoothu is the famous folk dance of Kerala regarding which statement 1, 2 and 4 are correct.

109.(d) The Southern Command of Indian may has its headquarters at Cochin not in Chennai. The Regional Headquarters of Coast Guard is located at Mumbai, Chennai and Port Blair.

110.(a) National Song was composed originally in Sanskrit (not in Bengali).

111.(a) The virtual politician called SAM was developed by Nick Gerritsen, a 49 year old entrepreneur in New Zealand.

112.(b) Statement (2) is incorrect. This award was instituted over 300 years ago.

113.(a) The Central Coffee Research Institute, established during 1925, is located in the heartland of coffee tracts, near Balehonnur in Chikmagalur district of Karnataka.

114.(b) The National Hydroelectric Power Corporation Ltd (NHPC) is not a Defence Public Sector Undertaking (DPSU). NHPC is involved in the planning, development, and implementation of hydroelectric power projects in India, not in the defense sector.

115.(c) Jayne Anne Phillips is the author of the book. It is a mesmerizing story about a mother and daughter seeking refuge in the chaotic aftermath of the Civil War - and a brilliant portrait of family endurance against all odds.

116.(a) Exercise NOMADIC ELEPHANT is an annual training event conducted alternatively in India and Mongolia. Last edition was conducted in Mongolia in July 2023.

117.(d) Martina Navratilova holds the record for the most Wimbledon singles titles, winning a total of nine championships during her career. Second to her is Roger Federer with a total of eight titles.

118.(c) The Olympic Phyrge is a blue, white and red cap-like figure with the golden Paris 2024 logo across its chest (blue, white and red are the colours of the French flag.) The design of the Paralympics 2024 mascot is largely the same— but features a prosthetic leg.

119.(c) The first recipients of the Bharat Ratna were politician C. Rajagopalachari, scientist C. V. Raman and philosopher Sarvepalli Radhakrishnan, who were honoured in 1954.

120.(b) The Thomas Cup is a prestigious international badminton competition, also known as the World Men's Team Championships. It was first held in 1949 and is organized by the Badminton World Federation (BWF). It is named after Sir George Thomas, a British badminton player who proposed the idea of a world team championship.