HINTS & SOLUTION

- (c) Silk is produced by the larva of a silkworm, specifically during the stage when it spins a cocoon around itself. The silk fibres are secreted by the silkworm larva as a proteinaceous substance, which hardens upon exposure to air and forms the silk thread used in textile production.
- 2. (b) Saliva has several important functions, including facilitating swallowing, keeping the mouth and teeth clean, and aiding speech by helping with the movements of the lips and tongue. However, it does not play a role in increasing red blood cells (RBCs) in the body; this function is related to the bone marrow and other physiological processes.
- **3.** *(a)* The renal artery is the blood vessel responsible for supplying blood to the kidneys. It branches off from the aorta and delivers oxygenated blood to the kidneys for filtration. The other arteries mentioned—hepatic artery, pulmonary artery, and carotid artery—supply blood to the liver, lungs, and brain, respectively
- 4. *(c)* Edward Jenner is known for the discovery of vaccination, which revolutionized medicine by providing a method to prevent smallpox. James Watson, along with Francis Crick, is credited with discovering the double

helix structure of DNA, which was a ground breaking advancement in genetics. Karl Landsteiner made the significant discovery of blood grouping, which is crucial for safe blood transfusions. Lastly, Alexander Fleming discovered penicillin, the first true antibiotic, which has saved countless lives by effectively treating bacterial infections.

- 5. (d) Whale, Bat, Kangaroo, and Hippopotamus — belong to the class Mammalia. Mammals are characterized by features such as having mammary glands that produce milk, a neocortex (a region of the brain), fur or hair, and three middle ear bones. The whale, despite being an aquatic animal, is a mammal. Similarly, bats, though capable of flight, are also mammals. Kangaroos are marsupials, a subset of mammals, and hippopotamuses are large, semiaquatic mammals.
- 6. (a) Cellulose is not soluble in water that is why it is used in making shatterproof glass. Cellulose is a poly saccharide.
- 7. (c) Probiotics are the living microorganisms that to be healthy for host organism. Lactic acid bacteria, Bifido bacteria are common type of microbes used as probiotics. Certain

yeast and Bacilli may also useful. Probiotics are commonly consumed as a part of fermented food with specially added active live cultures such as yoghurt or as dietary supplements.

- 8. (c) Oxidation reactions can produce free radicals. In turn, these radicals can start chain reactions. When the chain reaction occurs in a cell, it can cause damage or death. When the chain reaction occurs in a purified monomer, it produces a polymer resin, such as a plastic, a synthetic fibre, or an oil paint film. Antioxidants terminate these chain reactions by removing free radical intermediates, and inhibit other oxidation reactions. They do this by being oxidized themselves, so antioxidants are often reducing agents thiols. ascorbic such as acid. orpolyphenols.
- **9.** (b) Sea cow is a mammal. It is a herbivore and it grows up to 9 meters. It looks like a large seal. Sea horse is a fish not a mammal. Sea lion is a mammal. It is a carnivore. It is also known as eared seal.
- 10. (b) Bioaccumulation is defined as the increase in concentration of a substance(s) in an organism or a part of that organism. Toxic substances are lipophilic or fat-loving, the reason why these substances are deposited and concentrated in the fat tissues of the organisms. The affected organism has a higher concentration of the substance

than the concentration in the organism's surrounding environment. The toxic substances are very slowly metabolized or excreted so if the organism keeps on consuming prey or contaminated food with toxic substances, the concentration of the substance will further increase in its body, hence, bioaccumulation results. When a certain threshold level is reached, measured in parts per million (ppm), symptoms due to the type of toxin are manifested.

- 11. (d) Stomata are minute pores that are used for gas exchange. Air containing carbon dioxide and oxygen enter the plant through these pores where it is used in photosynthesis and respiration. Also water vapour evaporates into the atmosphere through these pores by a process called transpiration.
- 12. (b) It is a double replacement reaction. Fe2O3(s) + 3 CO(g) = 2 Fe(l) + 3 CO2(g).
- **13.** (*d*) The Sound propagation is facilitated by the collisions between the particles of medium. The intermolecular distance in solids is very small whereas in gases it is very high. Therefore the velocity of sound is maximum in solids and minimum in gases.
- **14.** (*a*) Milk of magnesia (magnesium hydroxide) is most commonly found as a liquid. The magnesium in the liquid

can both neutralize excess stomach acid to treat indigestion..

- **15.** (c) 'Misch metal' alloyed with iron is used in the cigarettes lighters. Misch metal is an alloy of cerium (50%), lanthanum (25%), neodymium (18%), praseodymium (5%) and other rare metals.
- **16.** (b) Limestone (CaCO3) is the main raw material used in the manufacture of cement. Copper is good conductor of electricity hence, it is used in electrical goods. Bauxite is an ore of Al. It is used in manufacture of aeroplanes. Manganese is used in steel industry to form manganese steel.
- 17. (b) Each alpha particle contains two protons and two neutrons. Total number of nucleons = Number of protons + Number of neutrons = 2+2 = 4. Total number of nucleons = Mass number of an element. Thus mass number of alpha particle is 4 which is equal to molecular weight of helium atom.
- 18. (a) Sulphuric acid (H2SO4) reacts very vigorously with water, in a highly exothermic reaction. Thus if you add water to concentrated sulfuric acid, it can boil and you may get a nasty acid burn. That's why for dilution, acid is added to water not water to acid as specific heat of water is quite large and it can absorb large quantity of heat produced by sulphuric acid. Moreover

water is less dense than sulphuric acid, so if you pour water on the acid, the reaction occurs on top of the liquid. If you add the acid to the water, it sinks and any wild and crazy reactions have to get through the water or beaker to get to you.

- **19.** (*d*) The main constituents of liquefied petroleum gas (LPG) are propane (C3H8) and butane (C4H10). LPG is commonly used as a fuel for heating appliances, cooking equipment, and vehicles.
- **20.** (b) Chemical changes occur when a substance combines with another to form a new substance. Crystallization of sodium chloride is not a chemical as water of crystallization can be lost to get salt again . Similarly melting of ice is reversible .However souring of milk is a chemical change as it is not reversible and a new compound is formed.
- **21.** (*a*) During the setting of cement, the structure has to be cooled by spraying water because setting of cement is an exothermic process and involves hydration of calcium aluminates and calcium silicate.
- **22.** *(c)* Hydrocarbons of petroleum are the base materials for synthetic detergents. Synthetic detergents are derived from petrochemicals, which are compounds obtained from petroleum. These detergents are made by the chemical

processing of hydrocarbons derived from petroleum and coal. This process involves sulfonation, sulfation, and the use of various other chemical reactions to produce detergent molecules.

- **23.** (b) When an electron and a proton are accelerated through the same potential difference of 1000 V, they gain the same amount of kinetic energy because kinetic energy is given by $K \cdot E = q \cdot V$. Since the charge q and the potential difference V are the same for both particles, they both acquire the same kinetic energy. However, the electron has a much smaller mass compared to According the proton. to the relationship K.E = $1/2mv^2$, for the same kinetic energy, the particle with the smaller mass (the electron) will have a higher speed. Therefore, the speed of the electron will be higher than that of the proton.
- **24.** *(c)* The radiation emitted by sun exerts a radial pressure on the comet. So the tail of comet is always directed away from the sun.
- **25.** (*a*) When pure hydrogen is used as the fuel, the only by-products generated from the fuel cell are pure water and heat. Similar to a battery, a fuel cell with a supply of hydrogen and oxygen can be used to power devices that use electricity.

- 26. (a) Alternating current is one which is constantly changing direction. Alternating current have two cycles positive half cycle and negative half cycle. Mains electricity is an a.c. supply which is supplied to homes in India at 220 V AC at 50 Hz. Thus, in our houses the current in A.C. electricity line changes direction = $50 \times 2 = 100$ times per second.
- 27. (c) A is correct but an image formed on the retina of eye persists for about 1/16sec (0.06 sec) after it changes.
- **28.** (c) When stretching wires of the same material with the same load, the elongation depends on the ratio L/d2, where L is the length and d is the diameter. The highest ratio is for the wire with 3m length and 1.5mm diameter, meaning it will elongate the most.
- **29.** (*c*) The appearance of blue colour of sky is due to scattering of light which is not possible in absence of atmosphere.
- **30.** (*b*) The graph shows that the object is at rest.
- **31.** *(c)* If any magnet is divided into two parts, every part will be a new magnet.
- **32.** (*a*) When an object is placed at infinity relative to a concave lens, the light rays coming from the object are parallel to the principal axis. A concave lens

causes these parallel rays to diverge as if they were coming from the focal point on the same side as the object. Therefore, the image formed is at the focal point, highly diminished, and virtual.

- 33. (d) An optical filter is designed to selectively transmit light of certain wavelengths (colours) while blocking or absorbing others. This allows for the control of the spectral composition of the light that passes through the filter. commonly Filters are used in photography, scientific instruments, and various optical applications to achieve the desired colour effects or to isolate specific wavelengths for analysis.
- **34.** (d) When a particle is moving in a uniform circular motion with constant speed and radius. the acceleration of the particle is given by V^2/r . The particle will exhibit centripetal acceleration.
- **35.** (*d*) Attorney General of India is appointed by the President of India under Article 76(a) of the Constitution and holds office during the pleasure of the President.
- **36.** *(b)* The correct sequence is, Discussion on Budget, Appropriation Bill, Finance Bill, Vote on Account.
- **37.** *(a)* The writ of Prohibition is an order from a superior court to a lower court

or tribunal directing the judge and the parties to cease the litigation because the lower court does not have proper jurisdiction to hear or determine the matters before it.

- 38. (c) The Forty Second Constitution Amendment Act. 1976 has incorporated ten Fundamental Duties in Article 51(a) of the constitution of India The 86th Constitution Amendment Act 2002 has added one more Fundamental Duty in Article 51(a) of the constitution of India. As a result, there are now 11 Fundamental Duties of the citizen of India.
- **39.** (b) The State list contains 66 subjects of local or state importance. The state governments have the authority to make laws on these subjects. These subjects include police, local governments, trade, commerce and agriculture. Parliament has exclusive power to make any law with respect to any matter not enumerated in the Concurrent List or State List..
- 40. (b) 'Adjournment' refers to postpone the further transaction of the business for specified time by the presiding officer of the House. Adjournment terminates the sitting of the House which meets again at the time appointed for the next sitting. Adjournment sine die refers to termination of a sitting of the House without any definite date being fixed for the next sitting.

- **41.** (*a*) NRIs can't vote if they have acquired citizenship of other country..
- **42.** *(c)* A person born in India on or after 26th January 1950 but before 1st July 1987 is a citizen of India by birth irrespective of the nationality of his parents, considered citizen of India by birth if either of his parents is a citizen of India at the time of his birth. The citizenship of India is mentioned in Articles 5 to 11 (Part II)..
- 43. (b) President can issue an ordinance only when both houses of parliament are not in session (Art 123). No age is prescribed for minimum appointment as a judge of the Supreme Court in the Constitution. The age of a Judge of the SC shall be determined by such authority and in such manner as parliament may by law provide. NDC is composed of the PM as its head, all Union Cabinet ministers, the CMs of all states, CMs/ Administrators of all UTs and the members of the Planning Commission There is no constitutional provision regarding the accountability of the planning commission the parliament.
- **44.** (*a*) Part IX and Eleventh Schedule were added by 73rd Constitutional Amendment Act, 1992 which contain provisions for Panchayats, Part IX A. Twelfth Schedule were added by 74th Constitutional amendment act, 1992 which contain provisions for

DEFENCE DIRECT EDUCATION

Municipalities but Article 243 Q envisages three types of municipalities: Nagar Panchayats for a transitional area, Municipal Council for smaller urban areas and Municipal Corporation for larger urban areas.

- **45.** *(c)* Chief Justice of India, Union Cabinet Minister, Chief Election Commissioner and Cabinet Secretary is the correct order of precedence.
- **46.** (*c*) In Rajya Sabha, 12 members are nominated by the President from the persons who have special knowledge in art, science, literature and social service. In Lok Sabha, 2 members are nominated by the President from the Anglo-Indian community (Art 331). A nominated member can vote only in the Vice- Presidential elections.
- **47.** *(b)* According to Article 143 (Power of President to consult Supreme Court.
- **48.** (b) The largest Committee is the committee of Estimates, given its 30 members.
- **49.** (*c*) Rural sanitation is not a subject in the Concurrent List. Public Health and Sanitation comes under the State List.
- **50.** (c) According to NHRC Act 1993, only a retired CJI can become chairman of NHRC, appointed by President on the recommendation of a committee comprising of PM, Speaker of Lok

Sabha, Home Minister, Leader of Opposition of both Houses of Parliament and Deputy Chairman of Rajya Sabha.

- **51.** (b) Assertion and Reason as independent statements are true but does not explain each other..
- **52.** (*b*) President comes first, Vice-President second, Prime Minister third and Governors of states with in their respective State comes fourth in the Warrant of Precedence. According to Indian order of precedence, Judges of the Supreme Court – Rank 9 ; Deputy Chairman of Rajya Sabha – Rank 10 ; Attorney General of India – Rank 11 ; Members of Parliament – Rank 21.
- **53.** (*a*) Article 301 pertains to Freedom of Trade, Commerce and Intercourse. In the original constitution right to property was a Fundamental Right under Article 19(1) (f). But 44th Amendment Act, 1978 omitted sub clause f, and inserted Article 300A to make right to property a legal right. The Government at that time was Janta Party government.
- **54.** (*b*) Tropical moist deciduous forests cover the largest area among the different forest types in India. These forests are characterized by a moderate amount of rainfall and a distinct dry season during which the trees shed their leaves. They are predominantly found in regions such as the Eastern

Ghats, the foothills of the Himalayas, and parts of central India.

- **55.** (*b*) Bass Strait: Located between mainland Australia and Tasmania. This strait is not in Asia; it is in Oceania.
- 56. (b) The South-West monsoon in India is primarily driven by two key factors: the low-pressure area that forms over the Punjab plains during the summer due to intense heating, and the highpressure area over the southern Indian Ocean. This pressure difference causes moist air from the Indian Ocean to be drawn towards the subcontinent. leading to the onset of the South-West monsoon These winds bring significant rainfall to India, especially during the summer months.
- **57.** (*b*) The correct sequence of nuclear power plants in India, ordered by their increasing power generation capacity, is Narora in Uttar Pradesh, followed by Kaiga in Karnataka, then Rawatbhata in Rajasthan, and finally Tarapur in Maharashtra, which has the highest capacity among them.
- **58.** (b) Both 'A' and 'R' are individually true but 'R' is not the correct explanation of 'A'.
- **59.** (c) The correct matching of mountain passes with their respective states in India is as follows: Zoji La is a significant pass located in Jammu & Kashmir, providing a vital link

between the Kashmir Valley and Ladakh. Bara Lacha is situated in Himachal Pradesh and is a highaltitude pass on the Leh-Manali highway. Jelep La is found in Sikkim and serves as a historic trading route between India and Tibet. Lastly, Niti Pass is located in Uttarakhand and is one of the northernmost passes in the state, connecting the region to Tibet. The correct sequence for the passes and states is Zoji La (Jammu & Kashmir), Bara Lacha (Himachal Pradesh), Jelep La (Sikkim), and Niti Pass (Uttarakhand).

- **60.** *(c)* High spring tides occur during the new Moon and full Moon phases because, at these times, the Sun, Earth, and Moon are aligned in a straight line. This alignment, known as syzygy, enhances the gravitational pull on Earth's oceans from both the Sun and the Moon, resulting in higher than normal tides, known as spring tides.
- **61.** *(a)* Koyli- Gujarat ; Trombay- Suburb of Mumbai ; Jamnagar- Gujarat ; Manglore- Karnataka.
- **62.** *(c)* The Barail hills are the hill range that separates the state of Manipur from the state of Nagaland. This range is an extension of the Patkai range and forms a natural boundary between these two northeastern Indian states. The Barail hills are significant in the geography of the region, influencing the climate and ecosystem of the area.

- **63.** (c) The Venice Simplon-Orient-Express passed through the UK, France, Switzerland, Austria , Italy , Czech Republic, Germany, Hungary, Romania, Bulgaria and Turkey.
- **64.** (b) The correct sequence of bodies of water in increasing order of salinity is Baltic Sea, North Sea, Gulf of California, and Red Sea. The Baltic Sea has the lowest salinity due to its high freshwater input and limited oceanic exchange. The North Sea has moderate salinity levels. The Gulf of California has higher salinity because of its semi-enclosed nature and higher evaporation rates. The Red Sea has the highest salinity among these, driven by intense evaporation and limited fresh water inflow.
- **65.** (d) Sundari tree is found in Sundarban area of West Bengal. Sundarban is a largest wetland area in the world. Sundarban got its name itself due to abundance of 'Sundari' tree in this area..
- **66.** (*c*) The jet streams are strong, generally westerly winds concentrated in a relatively narrowand shallow stream in the upper troposphere of the earth.
- **67.** (*c*) India is the original home of cotton plant, and India ranks number one in the world accounting for 20% of the total area planted under cotton. The

cotton hybrid variety H–4 developed first and Raj–16, Dhanalaxmi, and Fateh are the variety which were developed in India.

- **68.** (*b*) Son, and Narmada rivers originate from Amarkantak region. while Mahanandi originates from shiwa mountaied in the Chhattigarh.
- **69.** (*d*) In the 20th century tea was being grown in 3 African countries like Tanzania, Kenya and Uganda. So, the assertion is wrong. But the reason is correct because tea plants need highly organic or loamy soils.
- 70. (c) The correct sequence of topographical features from the upper to the lower course of a river is Rapids, Ox-bow lake, and Estuary. Rapids are typically found in the upper course of a river, where the river flows rapidly over a steep gradient. This part of the river is characterized by a fast flow and turbulent water, often over rocky terrain. As the river moves into its middle course, it begins to meander, leading to the formation of features like Ox-bow lakes. These are created when a river's meander is cut off from the main flow, forming a crescentshaped lake. Finally, as the river approaches its lower course, it slows down and begins to deposit sediments, eventually forming an estuary. An estuary is where the river meets the sea or ocean, mixing fresh and saltwater

and creating a unique environment rich in nutrients and biodiversity.

- **71.** (*a*) Israel has common borders with Lebanon, Syria, Jordan and Egypt.
- **72.** (*a*) New Economic Policy was adopted in 1991 based on Rao-Manmohan model. Stabilization component of any economy is essentially a short-term programme while the structural readjustment component is a long term process.
- **73.** (b) Progressive Tax is a process in which as the income of a person increases, rate of income tax on the income also goes up. Regressive Tax is the process according to which as income of a person goes up, rate of tax goes down. A progressive tax structure improves the distribution of income.
- 74. (d) HDI or Human Development Index measures achievements in terms of life expectancy, literacy and adjusted real income (standard of living). First HDR calculations were made in 1990 by Mehboob-ul-Huq.
- **75.** (*a*) Globalism is the policy of placing the interests of the world above those of individual nations. This also means that there would be free movement of goods and services across national boundaries. Socialism is an economic system based on state ownership of means of production including capital. Universalism means application of

certain basic principles at universal level.

- 76. (b) Weightage of food articles in WPI or the Wholesale Price Index is 22% and in CPI (IW) -57%. WPI is available on a weekly basis with base year 1993-94.
- **77.** (*a*) Infant mortality rate indicates the number of infant death under one years of age per 1000 live birth under one year of age.
- **78.** (d) The theme of the eighth Five Year Plan (1992- 1997) was "Plan with a human face".
- **79.** (*b*) The correct match is option (b).
- **80.** *(d)* In India plans are formulated by Planning Commission and are finally approved by National Development Council. All state chief ministers are members of NDC. The NDC is headed by prime minister of India.
- **81.** (*d*) Article 269 says taxes on income other than agricultural income shall be levied and collected by the Government of India and distributed between the Union and States. Entry 46 in the state list of Seventh Schedule. This gives power to the state governments to impose agricultural income tax.
- **82.** (d) The National Small Savings Fund (NSSF) offers several advantages,

including providing interest rates that typically higher than are those available in standard market savings accounts, making it an attractive option for savers. It is also considered almost risk-free because it is backed by the government, ensuring a high level of security for investments. Additionally, NSSF schemes offer favourable tax benefits, with deductions available for deposits and. in some cases. exemptions on interest earned. enhancing their appeal to investors.

- **83.** (*a*) BHARAT 22 ETF are managed by ICICI prudential mutual fund. Hence only statement 1 is correct.
- **84.** *(d)* IRDAI has formed a 13-member committee chaired by IRDAI Executive Chairman Dr Suresh Mathur to investigate the regulatory framework of microinsurance and recommend measures to increase demand for such products.
- **85.** *(a)* Corporation Tax, Wealth Tax and Income Tax are in the category of direct tax.
- **86.** (b) The Indian National Calendar, sometimes called the Saka calendar, is the official civil calendar in use in India. Saka Calendar begins on 22 March every year except in leap years when it starts on 23 March. The Kushana emperor Kanishka is credited with the initiation of the Saka era on his accession to the throne in 78AD.

- **87.** *(c)* The Treaty of Amritsar was signed in 1809 between Maharaja Ranjit Singh, the founder of the Sikh Empire, and Lord Hastings, who was the British Governor-General of India at that time. The treaty was aimed at defining the boundaries between the Sikh Empire and British-controlled territories, ensuring peace and mutual respect between the two powers.
- **88.** (c) Lok Nayak Jayaprakash Narayan was not a member of the Constituent Assembly. He was a prominent political leader and activist known for his role in the Indian independence movement and later for his leadership during the Jayaprakash Narayan movement against the Indira Gandhi government in the 1970s.
- **89.** (*a*) G.K Gokhale established The Servants of India Society in Pune, Maharashtra, on June 12, 1905. Pandit Madan Mohan Malviya founded Banaras Hindu University (BHU) at Varanasi in 1916. The Swatantra Party was founded by C. Rajagopalachari, was Indian conservative political party that existed from 1959 to 1974. Vinayak Damodar Savarkar founded Free India Society(student society).
- **90.** (d) Illbert Bill- 1883; Marley Minto Reforms- 1909; Rowlatt Act- 1919; Gandhi Irwin pact- 1931.

- **91.** (d) Doctrine of lapse, in Indian history, formula devised by Lord Dalhousie, governor-general of India (1848- 56), to deal with questions of succession to Hindu Indian states. According to 'Doctrine of Lapse', if any ruler of a protected state died without a natural heir, the states' authority will pass to the English East India Company. Annexation in the absence of a natural or adopted heir was enforced in the cases of Satara (1848), Jaitpur and Sambalpur (1849), Baghat (1850), Chota Udaipur (1852), Jhansi (1853), and Nagpur (1854)..
- **92.** (*a*) Annie Besant collaborated with both the Indian National Congress and the Muslim League during the Home Rule Movement to unite different political groups and gain mass support. Her strategic alliance with these groups was aimed at broadening the movement's appeal and effectiveness, thereby strengthening the push for self-rule. Hence, both statements are true, and Statement II accurately explains why Besant worked with both parties.
- **93.** (b) Rig Vedic Aryans were not acquainted to the use of Iron.
- **94.** (c) Mahavira was a teacher of the religion of Jainism. He lived in India. His followers believed that he was the 24th in a line of great teachers. These teachers were called tirthankaras.

- **95.** (*d*) Prarthana Samaj was founded by M.G. Ranade and R.G. Bhandarkar in 1867 with an aim to make people believe in one God and worship only one God. The main reformers were the intellectuals who advocate reforms of the social system of the Hindus. He never demanded abolition of untouchability.
- **96.** (b) The edicts focus on social and moral precepts rather than religious practices or the philosophical dimension of Buddhism. Major themes are Ashoka's conversion to Buddhism, the description of his efforts to spread Buddhism, his moral and religious precepts, and his social and animal welfare.
- **97.** (*a*) Dyarchy, a system of double government was introduced by the Government of India Act (1919) for the provinces of British India. Dyarchy was introduced as a constitutional reform by Edwin Samuel Montagu (secretary of state for India, 1917-22) and Lord Chelmsford (viceroy of India, 1916-21).
- **98.** (c) Hieun Tsang was a Chinese Buddhist monk who visited the kingdom of Harshvardhan and Kumar Bhaskar Varma.
- **99.** (d) The Theosophical Society was officially formed in New York City, United States, in November 1875 by Helena Petrovna Blavatsky, Henry

Steel Olcott, William Quan Judge and others.

- 100. (d) The immediate cause of Nawab Sirai-ud-Daula's attack on Calcutta in 1756 was the refusal of the English East India Company to demolish the fortifications of their settlement in Calcutta. The Nawab had demanded the dismantling of the fortifications, which he viewed as a direct threat to his sovereignty. The English company's refusal to comply with this demand led to the Nawab's decision to attack and capture Calcutta, resulting in the significant event known as the Black Hole of Calcutta.
- **101.** *(c)* Ashtadhyayi, (Sanskrit grammar) written in the 6th to 5th century BCE by the Indian grammarian Panini.
- **102.** *(b)* University of Nalanda was set up by Gupta king Kumargupta I.
- 103. (c) Brihadeshwara Temple (Raja Rajeswara Temple) was built by emperor Raja Raja Chola I in 1010 AD. Meenakshi Temple located on the southern bank of the Vaigai River (Madurai, Tamil Nadu). It is dedicated to Parvati known as Meenakshi. Srirangam temple is one of the most illustrious Vaishnava temples in South India located on an island on the bank of Cauvery river. The Durga temple is located in Aihole, Karnataka. It was

built by Chalukyas between the 7th and the 8th century.

- 104. (b) The Gandhi-Irwin Pact was signed by Mahatma Gandhi and Lord Irwin on 5 March 1931 before the second Round Table Conference in London. One of the proposed conditions is Discontinuation of the civil disobedience movement by the Indian National Congress.
- 105. ECO-MARK (h)The is а certification scheme developed by the Government of India to label products that are environmentally friendly. This scheme helps consumers identify products that have minimal impact on the environment throughout their promoting sustainable lifecvcle. consumption and production practices.
- **106.** (c) Angola resigned OPEC membership as of January 2024 because the organization's production restrictions were depressing its oil export volume.
- **107.** (d) International Atomic Energy Agency (IAEA) is Headquartered in Vienna, Austria.
- **108.** (a) Statement 3 is not correct. As per the recent statistics Bangladesh is the largest contributor followed by Nepal and India.
- **109.** (c) Countries facing balance-of-payment difficulty may apply import

restrictions under provisions in the GATT 1994 agreement and under the General Agreement on Trade in Services (GATS).

- **110.** *(c)* The Assam Rifles is a central paramilitary force responsible for border security, counter-insurgency, and maintaining law and order in Northeast India and in Jammu & Kashmir in lines of Rashtriya Rifles.
- 111. (c) The Andaman and Nicobar Command is India's first and only joint tri-service command, with rotating three- star Commanders-in-Chief from the Army, Navy and Air Force reporting directly to the Chairman of the Chiefs of Staff Committee.
- **112.** *(b)* Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited both jointly developed EVM (Electronic voting Machine). It was implemented partly in 1999 election and totally in 2004 election.
- **113.** *(c)* The book Conquest of Self is authored by Mahatma Gandhi. It is part of his writings on self-discipline, personal transformation, and spiritual development.
- **114.** *(b)* The Nobel Peace Prize is indeed presented annually in Oslo, but it is not presented by the king of Norway. The prize is awarded by the Norwegian Nobel Committee in presence of King of Norway.

- **115.** (*a*) SONAR (Sound Navigation and Ranging) is used to determine the depth of seabed.
- 116. (c) The French Open is played on clay while US Open uses hard courts. Clay courts slow down the ball and produce a high bounce in comparison to grass courts or hard courts. Grass courts are the fastest type of courts in common use. An approximate North/South orientation is desirable to avoid the effects of low sun during evening play.
- **117.** *(d)* Cloud computing refers to applications and services offered over the Internet. The idea of the "cloud" simplifies the many network connections and computer systems involved in online services. Examples of cloud computing include online backup services, social networking services and personal data services.

- **118.** *(b)* The Swiss federal government remains deeply divided over EU membership as its long-term goal, and in a March 2001 referendum more than 70% of Swiss voters rejected rapid steps toward EU membership..
- **119.** *(c)* Himadri Station is India's first Arctic research station located at Spitsbergen, Svalbard, Norway. It was inaugurated on the 1st of July, 2008 by the Minister of Earth Sciences.
- **120.** *(a)* The correctly matched pairs are Limbu with Sikkim and Dongaria Kondh with Odisha. The Limbu tribe is indigenous to Sikkim, while the Dongaria Kondh are native to Odisha. The Karbi tribe, however, is from Assam, not Himachal Pradesh, and the Bonda tribe is found in Odisha, not Tamil Nadu. Thus, pairs 1 and 3 are accurate.