

HINTS & SOLUTION

1. (b) Meteor is a small celestial body which has entered the earth's atmosphere by the gravitational force of earth, when they pass close to it. Meteors typically occurs in the mesosphere, and most range in altitude from 75 km to 100 km.
2. (c) The assertion is correct and reason correctly explains the assertion because due to high temperature the atmospheric air gets heated and rises up. It cools down and precipitates while the cool air descends down to take the place of the vacuum.
3. (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.
4. (c) The correct sequence of different layers of atmosphere from the surface of earth is Troposphere, Stratosphere, Mesosphere and Ionosphere. Troposphere extends upto 8 km from earth surface, but at equator it is 16–18 km. Stratosphere extends above Troposphere 18–50 km. Mesosphere extends up to 80 km and above Mesosphere Ionosphere is present, which extends up to 400 km..
5. (b) Ocean currents are not slow most of the time and can be subsurface current also. So, statement '1' is wrong. But '2', '3' and '4' statements are correct.
6. (a) 25°–35° N and S in both hemisphere is a high pressure belt and high temperature zone. This belt owes its origin to the rotation of the earth and sinking and setting down of winds. This zone is of high pressure is called horse latitude because in ancient times the merchant carrying horse in their ships had to throw out of some of the horse while passing through this zone of calm in order to lighten their ships.
7. (a) Tides are the rise and fall of sea levels caused by the combined effects of gravitational forces exerted by the Moon, Sun, and rotation of the Earth.
8. (a) The Continent Antarctica has the highest mean elevation in the world. This is because it is covered by a thick layer of ice, about 7,100 feet (2,200 m) thick.
9. (b) Colombia, Kenya and Indonesia are countries through which the equator passes..
10. (d) Thailand, Laos and Bangladesh are countries bordering Myanmar..

11. (d) Geologists believe that the Indian peninsula was a part of the Gondwanaland (continent) which drifted northwards and India, Africa and other parts separated from each other.
12. (c) The longitude of Jabalpur's location is to the east of Bhopal, Bangalore is north of Chennai.
13. (d) The correct answer is neither of the statements is correct. Andhra Pradesh does not have the longest coastline among Indian states; that distinction belongs to Gujarat. Additionally, while Gujarat has a significant number of airports, it is Uttar Pradesh that currently holds the record for the highest number of airports in India.
14. (b) The correct matching of the given national parks and wildlife sanctuaries to their respective states is as follows: Kanger Ghati National Park is located in Chhattisgarh, Nagerhole National Park is in Karnataka, Kugti Wildlife Sanctuary is situated in Himachal Pradesh, and Sultanpur Bird Sanctuary is in Haryana.
15. (c) Both Andhra Pradesh and Karnataka share boundaries with maximum number of Indian states.
16. (c) Net sown area of Andhra Pradesh is 40% and West Bengal has 60%. So, the assertion is correct. But the reason is false because the alluvial soil is found in delta of rivers of the Godavari, the Krishna and the Cauvery of Andhra Pradesh.
17. (a) Barley requires cool climate with poor soil quality. Barley can be grown in high latitude even beyond the Arctic circle. Whereas rice needs hot and moist climate with rich soil. Millets are grown in hot and dry climate with poor soil, whereas tea needs warm and moist climate with high altitude.
18. (d) Saddle Peak, the highest peak in the Andaman and Nicobar Islands, is located in North Andaman. Standing at an elevation of 732 meters, it is a popular spot for trekking and offers stunning views of the surrounding area.
19. (b) The correct cold oceanic currents from the given list are the Oyashio Current, Okhotsk Current, Humboldt Current, and Benguela Current. These currents are characterized by their cold water temperatures, which have a significant impact on the climate and marine life in the regions they flow through. The Oyashio and Okhotsk Currents are located in the North Pacific, while the Humboldt Current flows along the west coast of South America, and the Benguela Current is found off the southwest coast of Africa. In contrast, the Cayenne Current is a warm current, not a cold one, making it the exception among the listed options.

20. (d) The correct statement regarding the Northern plains in India is that Dudhwa National Park is located in the Terai region. The Terai region, known for its rich biodiversity, is characterized by marshy and swampy lands. However, the Bhabar belt, which lies above the Terai, is not marshy but instead consists of porous and coarse pebbles and rock debris. Additionally, sandbars, ox-bow lakes, and braided channels are features typically associated with river systems and floodplains, not the Terai region. Thus, the only accurate statement is that Dudhwa National Park is in the Terai region.
21. (a) Sedimentary rocks form from the accumulation of sediments and often show layering and contain fossils, making Statements 1 and 2 correct. Statement 3 is incorrect because it describes igneous rocks, which form from magma, not sedimentary rocks.
22. (d) English, French, Chinese, Russian, Arabic and Spanish are the official language of U.N.O.
23. (d) All the statement given in the question is correct, except '4' because Mexico is not a member of European Union.
24. (d) World Braille Day is observed on January 4th, celebrating the importance of Braille in the lives of visually impaired individuals. National Space Day is marked on August 23rd, recognizing advancements and achievements in space exploration. World Pulses Day falls on February 10th, highlighting the nutritional and environmental benefits of pulses. Finally, World Heritage Day is celebrated on April 18th, promoting the preservation of cultural and natural heritage sites around the world.
25. (a) Bangladesh is not a member of the Association of Southeast Asian Nations (ASEAN).
26. (d) The European Commission is the EU's executive body. It represents the interests of the European Union as a whole (not the interests of individual countries). While the European Council has no formal legislative power, it is a strategic body that provides the union with general political directions and priorities, and acts as a collective presidency. The members of the European Council are the heads of state or government of the 27 EU member states, the European Council President and the President of the European Commission. The Commission operates as a cabinet government, with 27 members of the Commission. One of the 27 is the Commission President proposed by the European Council and elected by the European Parliament. The Council then appoints the other 26 members of the Commission in agreement with the

- nominated President, and the 27 members as a single body is then subject to a vote of approval by the European Parliament.
27. (c) Bharatnatyam is the dance of Tamil Nadu. The dance involves solo performances by devadasis or the temple dancer.
28. (b) The world's highest ground based telescopic observatory is located at Leh in India.
29. (a) Phalcon is radar system provided by Israel to India.
30. (a) Dancing on the brass plate: This is a unique feature of Kuchipudi dance, where the dancer performs on the edges of a brass plate, showcasing a combination of balance and grace. Bharatanatyam does not include this movement.
31. (a) This is the solution with explanation for the question and here are few more sentences supporting the answer in detail.
32. (c) States with observer status in SAARC include Australia, China, the European Union, Iran, Japan, Mauritius, Myanmar, South Korea and the United States. India has observer status in the SCO.
33. (d) Lakshya Sen is an Indian badminton player.
34. (c) Artificial satellite always launched from the earth to eastward direction because earth rotates from west to east, which makes it Geosynchronous. But the escape velocity is given by the booster of the rocket.
35. (a) A geostationary orbit (or Geostationary Earth Orbit - GEO) is a geosynchronous orbit directly above the Earth's equator (0° latitude), with a period equal to the Earth's rotational period and an orbital eccentricity of approximately zero. It is the part of space about 35,786 km (22,236 miles) above sea level, in the plane of the equator, where near-geostationary orbits may be implemented.
36. (d) It is a multi-role chopper with the Shakti engine manufactured by Hindustan Aeronautics Limited (HAL).
37. (c) Yudh Abhyas is an annual training practice between the United States Army and Indian Army.
38. (a) Novak Djokovic is a Serbian professional tennis player. He defeated Carlos Alcaraz Garfia (Spain) in the final of Paris Olympics 2024.
39. (c) Statement 3 is incorrect because the Phase-II system can intercept ballistic missiles with a range of up to 5,000 km.

40. (c) This statement is incorrect because advocates of globalization typically argue that it will lead to greater economic growth and cultural exchange, rather than cultural homogenization. On the other hand, critics of globalization often express concern that it could lead to the erosion of local cultures and cultural homogenization.
41. (b) NATO is an intergovernmental military alliance based on the North Atlantic Treaty which was signed on 4 April 1949. The organization constitutes a system of collective defence whereby its member states agree to mutual defence in response to an attack by any external party. NATO has 32 members, mainly in Europe and North America. Greece and Turkey became members of the Alliance in 1990.
42. (c) The Chairperson or a Member shall not be removed from his office except by an order made by the President on the ground of proved misbehaviour or incapacity after an inquiry made by a sitting Judge of the Supreme Court in which such Chairperson or other Member had been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.
43. (a) National Water Academy (NWA) is a training institution of the Ministry of Water Resources, Government of India. NWA conducts training programs that cover all aspects of water resources development and management at basin scale. NWA has its own self contained campus in the lush green environs of Khadakwasla, in Pune.
44. (d) 'Pradhan Mantri Ujjwala Yojana' (PMUY) is a flagship scheme with the objective of making clean cooking fuel such as LPG available to the rural and deprived households.
45. (a) Fiscal deficit = Revenue receipts + non-debt creating capital receipts – Total expenditure; Budget deficit = Total receipts – Total expenditure.
46. (c) In financial accounting, a balance sheet or statement of financial position is a summary of the financial status of an organisation which can be a sole proprietorship, a business partnership or a company. Assets, liabilities and ownership of equity are listed as on a specific date, which is normally the end of the financial year. A balance sheet is the "snapshot of a company's financial condition".
47. (d) Stamp duty is a form of tax that is levied on documents. It is levied by the union or the central government and collected and appropriated by the state governments. (Entry 91 in the union list; entry 63 in the state list of Seventh Schedule of Constitution of India).

48. (b) The Food Corporation of India (FCI) plays a crucial role in implementing the Minimum Support Price (MSP) policy. Once the government announces the MSP for various crops, the FCI, along with other state agencies, procures these crops directly from farmers at the set MSP.
49. (a) Revenue deficit = revenue receipts – Revenue expenditure; Budget deficit = Total receipts – Total expenditure; Fiscal deficit = Revenue receipts + Non-debt creating capital receipts – Total expenditure (F.D. is government borrowings); Primary deficit = Fiscal deficit – Interest payments.
50. (b) National income calculated on the basis of current price levels whereas National income at constant prices means that NI is being calculated by using a base year prices to arrive at real change in the NI National Income at constant prices indicates the actual performance of the economy.
51. (c) Base effect is almost an ubiquitous term which says that the previous data affects the calculation of the current data.
52. (d) If annual union budget is not passed by the lok sabha, it is tantamount to no confidence motion. So the govt submits the resignation of his council of ministers.
53. (c) UPS is designed to reduce the long-term financial burden on the government, unlike OPS, which was unsustainable due to its unfunded nature.
54. (c) 2, 3, 1, i.e. High birth rate with high death rate, High birth rate with low death rate, Low birth rate with low death rate..
55. (b) The correct answer is that GST (Goods and Services Tax) is a value-added tax levied on the sale of goods and services. GST, introduced in India in 2017, is an indirect tax that applies at every stage of the supply chain where value is added. Unlike direct taxes, which are imposed directly on income, GST is collected at each step of production and distribution but is ultimately borne by the final consumer. It is not limited to the manufacturing sector and does not apply as a non-refundable tax on exports, which are generally zero-rated under GST to promote competitiveness in global markets.
56. (d) All three factors can independently or collectively contribute to an increase in the fiscal deficit.
57. (c) The Human Development Index (HDI) is released by the United Nations Development Programme (UNDP). The HDI measures and compares the overall development of countries based on life expectancy,

education, and income levels. The UNDP publishes the HDI annually to assess and rank countries' human development progress. Other organizations like the World Bank, IMF, and World Economic Forum do not release the HDI.

58. (a) Rourkela Steel Plant (RSP) is the first integrated steel plant in the public sector in India. It was set up with German collaboration with an installed capacity of 1 million tonnes.
59. (c) A complete Yuga starts with the Satya Yuga, via Treta Yuga and Dvapara Yuga into a Kali Yuga.
60. (c) Apabhramsa means languages.
61. (c) Lion capital of Ashoka is in Saranath (not Rajgir).
62. (d) They embraced Buddhism because caste ridden Hinduism did not attract them.
63. (c) The Chola kingdom of the Sangam period extended from modern Tiruchi district to southern Andhra Pradesh. Their capital was first located at Urayyur and then shifted to Puhar. Karikala was a famous king of the Sangam Cholas. Pattinappalai portrays his early life and his military conquests. In the Battle of Venni he defeated the mighty confederacy consisting of the Cheras, Pandyas and eleven minor chieftains. The Chola emperor launched a successful naval expedition against the sailendra kingdom..
64. (a) The geographical location of this town is between the rivers Indus and Jhelum. Takshashila was an ancient city in what is now north-western Pakistan. It is an important archaeological site. In 1980, it was declared a UNESCO World Heritage Site.
65. (b) The early Vedic Aryans indulged in Image Worship and Yajnas.
66. (b) The Barbara rock cut caves are the oldest rock cut caves. They were originally made for the Ajivikas during the Mauryan period (322-185 BCE). The Ellora caves were built between 5th century and 10th century. There were 34 caves out of which 12 were Buddhist caves, 17 were Hindu caves and 5 were Jain caves. The proximity of the caves clearly demonstrates the religious harmony prevalent at that period of time.
67. (a) Guru Arjun Dev, the fifth Sikh Guru, was instrumental in compiling the Adi Granth, the sacred scripture of Sikhism, which later became the Guru Granth Sahib, the eternal Guru of the Sikhs. The Adi Granth is a collection of hymns and writings that are central to Sikh worship and teachings. While Guru Amar Das, the third Sikh Guru, introduced the concept of Langar,

which is a communal kitchen, the concept of Miri and Piri, representing spiritual and temporal authority, was actually introduced by Guru Hargobind, the sixth Sikh Guru. Guru Ram Das, the fourth Guru, was known for founding the city of Amritsar, but not for the Dal Khalsa, which was a military force established in the 18th century. Guru Gobind Singh, the tenth Sikh Guru, founded the Khalsa in 1699, but the "Manji" system, which refers to spreading the Sikh faith, was established by Guru Amar Das, not Guru Gobind Singh. Thus, the only correct match is Guru Arjun Dev with the compilation of the Adi Granth.

68. (b) Third Carnatic War (1756–1763); The First Anglo–Mysore War –(1767–1769); The First Anglo–Burmese War–(1824–1826); The Second Anglo–Afghan War (1878–1880).
69. (b) The Doctrine of Non-Violence and Civil Disobedience associated with Mahatma Gandhi were influenced by the works of Ruskin, Tolstoy and Thoreau.
70. (d) The Brihadeshwara temple, called the Big Temple, is dedicated to Lord Shiva. It was built by the great Chola King Raja Raja 1 (985 -1012 A.D). It is an outstanding example of Chola architecture. Recognizing its unique architectural excellence, UNESCO has declared it a World Heritage Monument.
71. (a) The Doctrine of Lapse was introduced by Lord Dalhousie. The states annexed by the application of this doctrine of lapse were Satara, Jaitpur and Sambalpur, Baghat, Udaipur, Jhansi and Nagpur. Due to this annexation policy discontent simmered among many sections of Indian society and the largely indigenous armed forces; these rallied behind the deposed dynasties during the Indian rebellion of 1857 also known as the Sepoy Mutiny of 1857..
72. (c) Raja Ram Mohan Roy was an Indian socio-educational reformer who was also known as 'Maker of Modern India' and 'Father of Modern India'. He was born on May 22, 1774 into a Bengali Hindu family. He was the founder of the Brahmo Samaj, one of the first Indian socio-religious reform movements. He advocated the study of English, Science, Western Medicine and Technology. He was given the title 'Raja' by the Mughal Emperor..
73. (c) The Surat Split was a turning point in the history of Nationalist Movement in India. The main reason for the split in the Indian National Congress at Surat was the lack of faith which Extremists had in the capacity of the moderates to negotiate with the British Government.

74. (d) Govt of India act 1919 is known as montegue-chelmsford reforms which aimed at constitutional reforms.
75. (c) The greatest lawgiver of ancient India is regarded as Manu. Manu is traditionally credited with authoring the "Manusmriti" or "Laws of Manu," an ancient legal text that laid down the moral, social, and legal principles of Hindu society. The Manusmriti is one of the earliest works of Hindu law and has had a significant influence on the social and legal practices in ancient India.
76. (a) The founder of the Servants of India Society was Gopal Krishna Gokhale (G. K. Gokhale). He established the society in 1905 with the aim of promoting social reform and improving the welfare of the Indian people.
77. (c) A joint session of the Lok Sabha and Rajya Sabha is convened by the President under Article 108 of the Indian Constitution when there's a deadlock between the two Houses regarding a bill. This occurs if one House passes a bill and the other House rejects it, disagrees on amendments, or if six months pass without the second House passing the bill. In such cases, the President can call a joint session to resolve the issue. This mechanism ensures that legislative business can proceed even when the two Houses are in disagreement.
78. (d) The Directive Principles of State Policy are contained in Part IV of the Indian Constitution. These principles are guidelines for the government to frame policies and laws aimed at establishing a just society in the country. They are non-justiciable, meaning they are not legally enforceable by the courts, but they are considered fundamental in the governance of the country.
79. (a) "We, the people of India, having solemnly resolved to constitute India into a Sovereign Socialist Secular Democratic Republic do hereby Adopt, Enact and Give to ourselves this Constitution." This reflects the preamble's role in affirming the principles and values that guide the Constitution of India.
80. (b) The concept of 'Judicial Review' in the Indian Constitution is borrowed from the United States of America.
81. (b) The "Basic Structure Doctrine" was established by the Supreme Court of India in the landmark case Kesavananda Bharati v. State of Kerala (1973). This doctrine limits the power of Parliament to amend the Constitution, asserting that while Parliament has the power to amend the Constitution under Article 368, it cannot alter the "basic structure" or

fundamental features of the Constitution.

- 82.** (b) The Government of India (Allocation of Business) Rules, 1961 are made by the President of India under Article 77 of the Constitution for the allocation of business of the Government of India. The Ministries/ Departments of the Government are created by the President on the advice of the Prime Minister under these Rules. The Cabinet Secretary is the ex-officio Chairman of the Civil Services Board of the Republic of India.
- 83.** (a) Stock Exchange is the subject of union list..
- 84.** (b) Creation of a three-tier system was not the recommendation of Ashok Mehta Committee. According to this committee, the 3-tier system of Panchayati Raj should be replaced by the 2-tier system. Ashoka Mehta committee was appointed by the Janata Government under the chairmanship of Ashoka Mehta.
- 85.** (c) The Attorney General of India is the chief legal advisor of Indian government. He is appointed by the President of India under Article 76(1) of the Constitution. He must be a person qualified to be appointed as a Judge of the Supreme Court. The Attorney General has the right of audience in all Courts in India as well as the right to participate in the proceedings of the Parliament. He holds office during the pleasure of the President.
- 86.** (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).
- 87.** (d) The correct sequence is, Discussion on Budget, Appropriation Bill, Finance Bill, Vote on Account.
- 88.** (c) Protem Speaker performs the duties of the office of the Speaker from the commencement of the sitting of the new Lok Sabha till the election of the Speaker.
- 89.** (c) District Munsiff Court (District Munsif Court) is the court of the lowest order handling matters.
- 90.** (c) According to article 21 of the Indian Constitution, no person shall be deprived of his life or personal liberty except according to procedure established by law. The Supreme Court of India on 19 June 2013 in its decision established that right to life and liberty, enshrined under Article 21 of the Constitution, is available to foreign nationals also.

91. (a) In a pressure cooker, the food is cooked at a temperature above the normal boiling point of water. This is because, as the pressure inside the cooker increases, the boiling point of water also increases. The higher temperature allows the food to cook faster. Therefore, both the assertion and the reason are true, and the reason correctly explains the assertion.
92. (c) Diffraction pattern becomes narrower and crowded together.
93. (b) As scuba driver ascends towards the water surface, water pressure decreases, so according to Boyle's law air in his lungs expands to occupy a greater volume. Which increase the chances of bursting the lungs.
94. (c) The restoring force acting on the particle is always proportional to the displacement of the particle from the equilibrium position and is always directed towards the equilibrium position.
95. (b) The hollow bricks provide thermal insulations; the air in hollow bricks, does not allow outside heat or cold in the house to go out or come in the house. So, it keeps house cool in summer and warm in winter..
96. (d) Initially at start of heating from 0°C to 4°C there will be a contraction as a result of which volume decreases. On further heating beyond 4°C to 10°C the molecules gain kinetic energy and start moving more randomly. Thus, intermolecular distance increases as a result of which its volume increases..
97. (c) Ball bearings are used to reduce friction and friction is directly proportional to effective surface area. So if effective surface area is reduced then friction will also reduce..
98. (d) The velocity of sound in air actually increases with an increase in humidity, not decreases. Humid air is less dense than dry air, allowing sound waves to travel faster. The other statements are correct: the velocity of sound increases with temperature, is independent of pressure, and is not affected by changes in amplitude and frequency.
99. (d) Graphene is a two-dimensional material and has good electrical conduction. It is one of the thinnest but strongest materials tested so far. It can be used for conducting electrodes required for touch screens, LCDs and organic LEDs.
100. (a) An astronomical unit (abbreviated as AU, au or a.u.) is a unit of length equal to about 149,597,870.7 kilometers or approximately the mean Earth-Sun distance. The astronomical constant whose value is one astronomical unit is referred to as unit distance and is given by the symbol A.

- 101.** (b) Nuclear fission is a perfect example of chain reaction. In case of nuclear fission a heavy atomic nucleus (such as that of uranium) disintegrates into two nearby equal fragments with release of large amount of energy when large number of nuclei are brought closer together. In such a case the neutrons released, when one nucleus splits, strikes other nuclei causing them to split and the process continues. Now atomic bomb and nuclear reactor both works on nuclear fission chain reaction but chain reaction in nuclear reactor is controlled by control rods, made up of metal cadmium or boron a neutron absorbing material, whereas in atomic bomb there is no neutron absorber. So chain reaction goes uncontrolled and is very violent.
- 102.** (c) Cobalt-60 is useful as a gamma ray source because it can be produced in predictable quantity and high activity by bombarding cobalt with neutrons. This is commonly used in radiation therapy for treatment of cancer.
- 103.** (a) When calcium carbonate (CaCO_3) is heated, it undergoes thermal decomposition, breaking down into calcium oxide (CaO) and carbon dioxide (CO_2). This process is widely used in industries to produce quicklime (CaO).
- 104.** (d) Element with 18 protons and 22 neutrons will be the isobar of calcium if the atomic number of calcium is 20 and its mass number is 40.
- 105.** (a) The pH of fresh ground water slightly decreases upon exposure to air because when it comes to air, it absorbs the carbon dioxide (CO_2), and for carbonic acid (H_2CO_3) which is a weak acid i.e. less pH.
- 106.** (c) The assertion that all compounds contain more than one element is true because compounds are substances formed by the chemical combination of two or more elements in fixed proportions, such as water. However, the reason provided is false since compounds are not heterogeneous mixtures; they are homogeneous, meaning their composition is uniform throughout. Therefore, while the assertion is correct, the reasoning behind it is incorrect.
- 107.** (b) It helps in elimination of lead oxide.
- 108.** (a) Hard water does not give lather with soap because it contains calcium and magnesium ions. These ions react with the soap to form an insoluble precipitate, commonly known as soap scum, instead of forming a lather. This reaction reduces the effectiveness of the soap, preventing it from lathering properly. Therefore, the correct answer is (a) Hard water contains calcium and

magnesium ions which form precipitate with soap.

- 109.** (b) The macro nutrients provided by inorganic fertilizers are magnesium, manganese and sulphur.
- 110.** (c) The process of depositing a thin layer of one metal over the surface of other metal by the process of electrolysis is known as electroplating. Hence, when items or jewellery made of metals such as copper or nickel are placed in a solution having a salt of gold, a thin film of gold is deposited by passing an electric current.
- 111.** (b) All enzymes are protein by composition but all proteins are not enzymes.
- 112.** (b) Thyroid gland in human body contains iodine. Deficiency of iodine creates goitre disease. Which is observed by the enlargement of larynx.
- 113.** (d) The human heart possesses four chambers, two superior atria and two inferior ventricles. The atria are getting chambers and ventricles are providing chambers. Left ventricle pumps fully oxygenated blood to aorta then to the body. Right atrium gets deoxygenated blood from superior vena cava.
- 114.** (c) Cowper's gland is related with reproductive system. Cowper's gland is the bulbourethral gland found in human males. They are found in pair and secrete viscous secretion called pre ejaculate that helps in coitus.
- 115.** (c) A milkman puts banana leaf in milkpot because leaf can make the milk basic and avoid yeast formation (fermentation). Banana leaf has tryptophan which creates basicity..
- 116.** (b) Myopia, or nearsightedness, occurs when the eyeball is too long, causing light to focus in front of the retina instead of on it, making distant objects appear blurry. To correct this, a concave lens is used, which diverges the light rays, helping them focus directly on the retina and allowing the person to see distant objects clearly.
- 117.** (d) The retina is a crucial part of the eye, located at the back and responsible for detecting light and converting it into electrical signals through its photoreceptor cells. This process is essential for vision, as the brain interprets these signals to form images. Damage to the retina can cause significant vision loss or blindness, highlighting its importance in maintaining visual health.
- 118.** (c) Wine is an alcoholic beverage, produced from fermented juice, generally of grapes, Beer is the oldest alcoholic beverage manufactured by brewing and fermentation of cereal grains (e.g., barley). Whisky is a type of distilled alcoholic beverage

produced from molasses. Rum is also a distilled alcoholic beverage made from sugarcane's juice.

119. (a) The internal ear of human beings consists of three parts viz. cochlea, utricle and sacculus. The cochlea helps in hearing whereas utricle and sacculus help to maintain the body balance.

120. (a) The Rh factor is an antigen on red blood cells (Assertion). When an Rh-negative person receives Rh-positive blood, their immune system may react against the Rh antigen, leading to potential transfusion reactions (Reason). Thus, Statement II explains why knowing the Rh factor (Statement I) is crucial for safe blood transfusions.