Sharath Gore

Biology Mock Test 3 2022-23

Time : 75 Min	Bio : Full Portion Paper	Marks : 400

Hints and Solutions

101) Ans: **C)** FSH and LH from anterior pituitary
Sol: The release of FSH and LH from anterior pituitary is mainly stimulated ny the GnRH secreted from hypothalamus. GnRH is released by hypothalamus which stimulates secretion of gonadotropins by anterior pituitary which are of two types, FSH and LH. FSH (follicle stimulating hormones) stimulates growth of ovarian follicles and secretion of estrogens in female and spermatogenesis in males. LH (luteinizing hormone) stimulates progesterone secretion from corpus luteum in females and androgen secretion from Leydig's cells in males.

102) Ans: **A)** Citric acid converts to α-ketoglutaric acid
Sol: In decarboxylation, CO_2 is release in the reaction. When citric acid converts to α-ketoglutarate in the TCA cycle then one molecule of CO_2 is released.

103) Ans: **C)** Thalamus

104) Ans: **B)** Dobson units (DU)
Sol: A unit of measurement of the columnar density (mass of a substance per unit area integrated along a path) of a trace gas in earth's atmosphere is the Dobson unit (DU). It is widely used for the measurement of thickness of ozone gas in the atmosphere, e.g. concentration of ozone in ozonosphere is 300 DU whereas it is 50 DU in troposphere.

105) Ans: **B)** Mesoderm

106) Ans: **A)** Actin, troponin and tropomyosin
Sol: One thin filament probably has $300-400$ actin molecules about 50 tropomyosin and 50 troponin. It is said that tropomyosin plays a vital role in sensitizing the contractile proteins (actin and myosin) to calcium ions.

107) Ans: **D)** Two distinct photochemical reactions or processes
Sol: Emerson effect gave idea of two photochemical reaction one carried by shorter wavelength by absorbing from chlorophyll a (chl a 680) while other a long wavelength chlorophyll a (chl a 700).

108) Ans: **B)** Pollen tube
Sol: No pollen tube to carry sperms.

109) Ans: **A)** Viruses can be grown in sugary liquid

110) Ans: **C)** Pericycle

111) Ans: **D)** $C_6H_{12}O_6$
Sol: Glucose is completely reabsorbed in proximal tubule under normal conditions.

112) Ans: **A)** A = Kidney, B = Abdominal aorta, C = Ureters, D = Urinary bladder, E = Urethra, F = Renal pelvis

113) Ans: **B)** 10 pairs

114) Ans: **B)** O
Sol: The agglutination occurs between a compatible antigen and an antibody. Agglutination of blood cells results in the clumping of them. Here, AB blood antigens are mixed with unknown blood sample that resulted into agglutination and this is possible when AB antigens react with their specific antibodies i.e., anti-a and anti-b. Blood group O is without A and B antigens on the blood cells but have antibodies for both these antigens in the plasma.
Therefore, the unknown blood sample which was mixed with AB blood group is O in blood group.

115) Ans: **B)** Stomatal opening

116) Ans: **A)** Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
Sol: ER functions as cytoskeleton or intra-cellular and ultra-structural skeletal framework by providing mechanical support to colloidal cytoplasmic matrix. The ER can act as a circulatory system for intra-cellular circulation of various substances. Membrane flow may also be an important mechanism for carrying particles, molecules and ions into and out of the cells.

117) Ans: **D)** Antennae

118) Ans: **D)** All of these

119) Ans: **A)** Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
Sol: The chemo receptor of taste are the taste buds found on papillae of the tongue and on the soft palate. Each taste bud is a group of elongated spindle shaped receptor cells and supporting cells. The inner free ends of receptor cells bear fine sensory hairs while their outer ends are supplied by nerve fibers from VIIth and IXth cranial nerves. Taste buds open by taste pores into depressions between tongue papillae. The taste buds are sensitive to dissolved substances that stimulate

sensations of sweet, sour, bitter, salty etc.

120) Ans: **B)** Vivipary
Sol: Vivipary is undesirable for annual crop plants as seeds cannot be stored for next season.
Seed germinated inside the fruit while attached to the plant is called viviparous germination.
Vivipary is found in halophytes or marshy plants e.g.: Rhizophora and Sonneratia

121) Ans: **A)** transpiration
Sol: Lenticels are areas of some loosely arranged cells in the periderm. Because of more activity of certain portions of phellogen, the phellem cells are cut off very rapidly and so these cells are loosely arranged with much intercellular spaces. These loosely arranged cells are called complementary cells. Lenticels are characteristics of woody stem and help in gaseous exchange and transpiration (i.e., lenticular transpiration).

122) Ans: **C)** Both Statement 1 and Statement 2 are false
Sol: Living organisms are regarded as open system as these can gain or loose energy from external environment. All living organisms restore their energy either directly from sunlight or indirectly from food.

123) Ans: **C)** keystone species
Sol: Keystone species refered to those species which have significant and disproportionately large influence on the community structure and characteristics. It often has considerably low abundance and biomass as compared to dominant species. Removal of such species causes serious disruption in structure and function of community.

124) Ans: **A)** Nitrogen fixation
Sol: Many members of genus Glomus form mycorrhiza.
In mycorrhiza the fungal symbiont absorbs P from soil and passed it into the plants.
Plants having mycorrhizal associations show other benefits are as follows:
(i) Resistance to root borne pathogens.
(ii) Tolerance to salnity and drought.
(iii) Overall increase in plant growth and development.

125) Ans: **C)** The statement 1 is true but the statement 2 is false
Sol: Plasmid is extra-chromosomal DNA. Fertility factor is also known and is possessed by prokaryotic cells.

126) Ans: **A)** Species diversity increases as we move away from the equator towards the poles.
Sol: Species diversity on earth is unevenly distributed but shows interesting patterns. It is generally highest in the tropics and decreases towards the poles. Important explanations for the species richness of the tropics are: tropics had more evolutionary time they provide a relatively constant environment and they receive more solar energy which contributes to greater productivity.

127) Ans: **C)** Remains same
Sol: Consumption and production of solvent does not occur in osmosis. It is the just migration of solvent from the hypo tonic to hyper tonic solution, thus volume of solvent remains same.

128) Ans: **B)** ligule

129) Ans: **B)** Centromere
Sol: On the basis of the location of centromere the chromsomes are categorised as (i) Telocentric (ii) Acrocentric (iii) Submetacentric (iv) Metacentric.

130) Ans: **B)** Lands on a stigma

131) Ans: **C)** cytokinin/zeatin
Sol: Cytokinin has a very specific effect on cell division (cytokinesis), hence the name cytokinin. They contain kinetin and related compound generally called kinins. Chemically, cytokinin are degradation product of adenine, ATP, NAD and NADP. Cytokinin are essential for cytokinesis though chromosome doubling can occur in their absence. Cytokinin bring about division even in permanent cells.

132) Ans: **D)** Both (a) and (c)
Sol: As per chemiosmotic hypothesis energy released during movements of electrons through photosystems in photosynthesis is used to drive protons across the membrane against concentration gradient. As a result protons accumulate in thylakoid lumen or intrathylakoid space which further increases the proton gradient. This gradient is important due to the break down of the gradient provides enough energy to cause a conformational change in the F_1 particle of the ATPase, which makes enzyme to synthesise several molecules of energy -packed ATP.

133) Ans: **A)** Guanine

134) Ans: **D)** The statement 1 is false but statement 2 is true
Sol: Cell secretion occurs even in the prokaryotic cells (bacteria) in relation to the production of a variety of enzyme to the medium. In certain protozoa, vacuoles similar to the contraction expel water into the medium. Golgi complex are found, which by their contraction expel water into the medium. Golgi complex and other membrane found organelle are absent in prokaryotes.

135) Ans: **A)** Golden rice
Sol: Golden rice is a transgenic variety of rice which contains good quantities of β-carotene (provitamin A-inactive state of vitamin A)
β-carotene is a principal source of vitamin A.
As the grains of this rice is yellow in colour because of β-carotene and commonly known as golden rice. It is very useful for the people suffering from night blindness due to vitamin A deficiency.

136) Ans: **B)** noise
Sol: The Air (Prevention and Control of Pollution) Act, came into frce in 1981, which was amended in 1987 to remove the difficulties encountered during implementation, to give more powers on the implementing agencies and to impose more stringent penalties for violation of the provisions of the Act. The main oncern was also to amend the definition of air pollutants to include noise also. This is also known as the Air (Pollution and Control of Pollution) Amendment Act, 1987.

137) Ans: **A)** Heterophagosomes

138) Ans: **A)** Movement of the eyeball
Sol: Abducens is the sixth cranial nerve which innervates the external rectus muscle of the eye ball. It is responsible for turning the eye outwards. Movement of the tongue is controlled by the hypoglossal nerve. Neck movements is controlled by the facial nerve. Swallowing is controlled by glossopharyngeal nerve.

139) Ans: **B)** Energy
Sol: Because at each trophic level only 10% energy is left. Hence, the amount of energy decreases and pyramid will be straight and cannot be inverted in any condition.

140) Ans: **D)** Digestion or breakdown of organic compounds
Sol: The main role of bacteria is as a decomposer. The bacteria decompose the complex organic compounds into simple one which are reused in carbon cycle.

141) Ans: **B)** Adaxial and abaxial

142) Ans: **B)** H-bonds
Sol: Two strands of DNA molecules run in opposite or antiparallel direction because of presence of hydrogen bond because two base i.e. one in each chain of DNA molecule, joined together by hydrogen bonds.

143) Ans: **B)** glycogenesis
Sol: Glycogenesis is process in which the conversion of glucose to glycogen take place, which is stimulated by insulin from the pancreas. Glycogenesis occurs in skeletal muscles and to a lesser extent in the liver. Glucose that is taken up by cells is phosphorylated to glucose 6-phosphate and this is converted successively to glucose 1-phosphate, uridine diphosphate glucose, and finally to glycogen.

144) Ans: **A)** indigestion
Sol: Indigestion is the condition in which the food is not properly digested leading to a feeling of fullness. The causes of indigestion are inadequate enzyme secretion, anxiety, food poisoning, over eating and spicy food.

145) Ans: **B)** 5/6, 6/7 7/8 and 8/9
Sol: Four pairs of spermatheca are present in earthworm which are situated a pairs in the each 6th, 7th, 8th and 9th segments. They opens outside on inter segmental grove 5/6, 6/7, 7/8, 8/9.

146) Ans: **B)** Ascomycetes
Sol: True yeast bear asci which are not organized in to ascocarps. e.g., Schizosaccharomyces, Saccharomyces, Saccharomycodes,, Zygosaccharomyces, Nematospora. Therefore, yeast are classified under ascomycetes.

147) Ans: **A)** During inspiration external intercostal muscles and diaphragm contract.
Sol: During inspiration external intercostal muscles and diaphragm contract is the correc statement. Inspiration is a process by which fresh air enters the lungs. The diaphragm, intercostal muscles and abdominal muscles play an important role in this process. The diaphragm becomes flat and gets lowered by the contraction of its muscle fibres thereby increases the volume of the thoracic cavity in length and external intercostal muscles occur between ribs. These muscles contract and pull the ribs and sternum upward and outward thus increasing the volume of the thoracic cavity. The abdominal muscles play a passive role in inspiration. These muscles relax and allow compression of abdominal organs by the diaphragm.

148) Ans: **C)** Thigh is striated and voluntary
Sol: Thigh is striated and voluntary is correct location and type. Cardiac muscles are found in the wall of the heart and it is involuntary and slightly striated. Smooth muscles are found in gastrointestinal tract. These are non-striated and involuntary. Striated (or skeletal) muscles are found in the limbs and body walls. These muscles are voluntary (under the control of animal's will) and show dark and light bands thus are striated.

149) Ans: **C)** $W_1 = W_0 e^{rt}$
Sol: The exponential growth in plants expressed as:
$W_1 = W_0 e^{rt}$, where
W_1 =final size (weight, height, number etc.)
W_0 = initial size at the beginning of the period.
r = growth rate,
t = time of growth
e = base of natural logarithms
Here, r is the relative growth rate and is also the measure of the ability of the plant to produce new plant material, referred to efficiency index. Therefore, the final size of W_1 depends on the initial size, W_0.

150) Ans: **B)** passive immunity

151) Ans: **B)** Phaeophyceae
Sol: The larger (giant) parenchymatous forms of brown algae called kelps or sea weed or trees of seas or forest of sea. Sea weed may be marine.

152) Ans: **A)** S phase

153) Ans: **A)** Nephridia in earthworm, Malpighian tubules in cockroach and urinary tubles is rat

154) Ans: **A)** The carbonic anhydrase will be completely inhibited

155) Ans: **D)** (a) - (r), (b) - (p), (c) - (t), (d) - (s), (e) - (q)

156) Ans: **B)** Muscular diphragm between thorax and abdomen
Sol: Whale, bat and rat are mammals. Diaphragm is present in mammals. The diaphragm separates the thoracic cavity (with lung and heart) from the abdominal cavity (with digestive system and urogenital system).

157) Ans: **D)** Fuel wood

158) Ans: **B)** (iii) and (v)
Sol: Numerous children have been produced by in vitro fertilization having no abnormalities. Also foetal sex determination test should be banned as it is being misused for female foeticide.

159) Ans: **C)** Reverse transcriptase
Sol:

$$DNA \xrightarrow{\text{Transcription}} mRNA \xrightarrow{\text{Translation}} Protein$$

This one-way flow of information from DNA to mRNA and then to protein is called the central dogma of then to protein is called the central dogma of molecular biology by F.H.C. Crick (1958). But later on two American workers H. Temin and D. Baltimore reported that DNA is also formed from RNA in retroviruses, e.g., HIV. This is called reverse transcription or teminism, i.e.,

$$DNA \underset{\text{Reverse transcription}}{\overset{\text{Transcription}}{\rightleftarrows}} mRNA \xrightarrow{\text{Translation}} Protein$$

This reverse transcription occurs under the influence of reverse transcriptase enzyme. So, HIV viruses does not follow central dogma.

160) Ans: **D)** Squamous epithelium
Sol: Simple squamous epithelium is comprises of large flat cells whose edges fit closely together like the tiles in a floor, so it is also called pavement epithelium. The nuclei of the cells are flattened and often lie at the centre of the cells and cause bulgings of cells surface. The epithelium lines the blood vessels, lymph, vessels, heart terminal, bronchioles, alveoli of the lungs, walls of the Bowman's capsules, descending limbs of loop of Henle. In the blood vessels and heart it is known as endothelium.

161) Ans: **B)** Gases like sulphur dioxide
Sol: Gases like sulphur dioxide are removed by a scrubber. In a scrubber, the exhaust is passed through a spray of water or lime water. Water dissolves gases and the particles also become heavy and fall down. Lime reacts with sulphure dioxide to produce a precipitate of calcium sulphate or sulphite, used to remove soluble gases and particles.

162) Ans: **C)** acetylcholine
Sol: The excitatory neurotransmitter involved in the transmission of impulse at the neuro-muscular junction is acetylcholine. The neurotransmitter acetylcholine (Ach) is released at all neuromuscular junctions between motor neurons and skeletal muscle cells, at all synapses between preganglionic and postganglionic neurons in the autonomic nervous system, and at certain synapses between neurons in the central nervous system.

163) Ans: **D)** Encapsulated pressure receptors
Sol: Pacinian corpuscles present in the skin of certain parts of the body in mammals. These are encapsulated pressure receptors. Pacinian corpuscles are very rapid adapting pressure receptors in subcutaneous adipose tissue of both hairy and hairless vertebrate skin. They are also present in joint capsules, tendons, etc.

164) Ans: **C)** X-ray diffraction data of Maurice wilkins and Rosalind Franklin was the basis of Watson and Cricks DNA model.
Sol: The correct statements are as follows:
Haploid content of human DNA is 3.3×10^9 bp.
A nitrogenous base is linked to pentose sugar through N-glycosidic linkage.
DNA as an acidic substance was first identified by F.Meischer in 1869.
Ratios between adenine, thymine, guanine and cytisine are constant.

165) Ans: **B)** figure B as every plant part is unfolded
Sol: A herbarium is a collection of plants, which have been dried, pressed, mounted on herbarium sheets, identified and classified according to some approved system of classification. In the process of making a herbrium, plants are evenly pressed by unfolding all the plant parts between blotting papers (or newspaper) with the help of plant pressers.

166) Ans: **B)** Incomplete dominance
Sol: Based on his observations on monocybrid crosses Mendel proposed two general rules to consolidate his understanding of inheritance in monohybrid crosses. Today these rules are known as the Principles or Law of Inheritance: the First Law or Law of Dominance and the Second Law or Law of Segregation.
On the basis of such observations on dihybrid crosses (crosses between plants differing in two traits) Mendel proposed a second set of generalisations that we call Mendel's Law of Independent Assortment.

167) Ans: **D)** All of these

168) Ans: **B)** Somatic embryos can develop from

microspores.
Sol: Somatic embryos develop from somatic cells and their development is comparable to that of a zygotic embryo. They are just like a normal embryo except that their development is induced from a diploid somatic cell. Somatic embryo culture is induced by a high concentration of an auxin. Microspores are haploid cells and do not give rise to somatic embryo.

169) Ans: **D)** All of these

170) Ans: **A)** immunity

171) Ans: **A)** Pepsin

172) Ans: **C)** Right auricle
Sol: Deoxygenated blood carried by the superior vena cava, inferior vena cava and coronary sinus open into the right atrium. The superior vena cava carries blood from the body's upper region. The inferior vena cava is larger than the superior and carries blood from the lower body's region and the coronary sinus carries the majority of blood from the heart it self. The coronary veins opens into the coronary sinus.

173) Ans: **A)** Heterosome
Sol: Man is heterogametic as it has X and Y chromosomes.

174) Ans: **B)** Cyanobacteria
Sol: Some cynobacteria possess heterocyst like Nostoc, Scytonema etc. Heterocyst is a site of N_2 fixation.

175) Ans: **D)** short day plant
Sol: The condition (in the two given sets) shows that the plant requires the photoperiod shorter than the critical day length (which is 12 hour in this case). This plant needs uninterrupted dark period for flowering. So, it is a short-day plant. Short-day plants do not flower if they get photoperiod of more than critical day length or less than the critical dark period.

176) Ans: **B)** Approx. 0.7
Sol: The ratio of the volume of CO_2 evolved to the volume of O_2 consumed in respiration is known as the respiratory quotient (R.Q.) or respiratory ratio.

$$\text{R.Q.} = \frac{\text{volume of } CO_2 \text{ evolved}}{\text{volume of } O_2 \text{ consumed}}$$

The respiratory quotient depends upon the type of respiratory substrate used during respiration. When fats are used in respiration, the R.Q. is less than 1. For e.g., if fatty acid tripalmitin is used as respiratory substrate then R.Q. can be calculated as follows:

$$2(C_{51}H_{98}O_6) + 145O_2 \rightarrow 102CO_2 + 98H_2O + \text{energy}$$

Tripalmitin

$$\text{R.Q.} = \frac{102CO_2}{145O_2} = 0.7$$

177) Ans: **D)** Lenticel
Sol: Lenticels are some loosely arranged areas in the periderm. Lenticels are characteristics of woody stem. These are not found in leaves.

178) Ans: **B)** Nervous system
Sol: The nervous system develops from ectodermal layer.

179) Ans: **C)** Less than 5 per cent

180) Ans: **D)** Is covered by root cap
Sol: A group of initial cells, present at the subterminal region of the growing root tip, which is protected by a root cap is known as root apical meristem or root apex.

181) Ans: **B)** taxon
Sol: The term that can be used for any taxonomic rank is taxon. It is a unit of classification which may represent any level of grouping of organisms based on certain easily observable common characteristics. Mayr (1964) has defined taxon to be a taxonomic group of any rank that is sufficiently distinct to be worthy of being assigned to a definite category.

182) Ans: **B)** b and e
Sol: Correct statements are as follows:
b. In algae and fungi, both male and female gametes are motile
e. In dioecious animals, since male and female gametes are formed in different individuals, the organism must evolve special mechanism for gamete transfer.

183) Ans: **A)** Only statement X is correct and Y is wrong.
Sol: Eichhornia is an alien or exotic species. This plant was introduced in India due to its beautiful flowers and shape of leaves. It can propagate vegatatively at a phenomenal rate and spread all over the water body in a short period of time and drains off oxygen from water, which leads to death of fishes. It is also known as "Terror of Bengal".

184) Ans: **D)** IIrregular and asymmetric
Sol: A asymmetric or irregular flower means it cannot be divided into two similar halves by any vertical plane passing through the centre as in Canna.

185) Ans: **A)** Pacemaker
Sol: Also known as sino-atrial (S.A.) node.

186) Ans: **B)** Multinucleated
Sol: Smooth muscle fibre is a spindle-shaped, thick in the middle and thin at either ends uninucleated and has no sarcolemma. Contraction is slow, involuntary under the control of ANS.

187) Ans: **D)** endocrine pancreas
Sol: Islets of Langerhans are small groups of endocrine cells scattered through the material of the pancreas. Types of Islets of Langerhans are :

alpha (α)cells, which secrete glucagon; beta(β)cells, which produces insulin; and D cells, which release somatostatin and pancreatic polypeptide.

188) Ans: **D)** the ovum and sperms are transported simultaneously to ampullary -isthmic junction of the Fallopian tube
Sol: If the ovum and sperms are transported simultaneously to ampullary -isthmic junction of the Fallopian tube, then only fertilisation in humans is practically feasible. The fusion of a haploid male gamete (sperm) and a haploid female gamete (ovum) to form a diploid zygote is known as fertilisation. In human beings, it takes place in the ampullary isthmic junction of the oviduct (Fallopian tube).

189) Ans: **B)** In vivo germination
Sol: Germination of pollen grains completes on stigma i.e. in vivo which means in natural conditions or within the cell.

190) Ans: **C)** may suffer vitamin K deficiency and prolonged bleeding
Sol: Cattle fed with spoilt hay of sweet clover which contains dicumarol may suffer vitamin K deficiency and prolonged bleeding. A better understanding of the mode of action of vitamin K is made possible by the use of an anti- coagulant. One such naturally occurring antagonist of vitamin K is called as dicumarol. The discovery of the anti- coagulating property of dicumarol took place when it was established that consumption of improperly cured sweet clover hay caused cattle to develop the so-called "sweat clover disease" which is attributable to a serious alternation in the coagulability of the blood that, in turn, often results in fatal haemorrhage.

191) Ans: **A)** Species diversity, in general, increases from poles to the equator.
Sol: Species diversity in general increases from poles to the equator. Conventional taxonomic methods are not equally suitable for higher plants and microorganisms. Microorganisms cannot be preserved easily and so cannot be classified easily. India has only 2.4% of the world's land area, its share of the global species diversity is an impressive 8.1 percent.
Therefore, it makes our country one of the mega-diversity countries of the world. Nearly 45,000 species of plants and twice as many of animals have been recorded from India.

192) Ans: **B)** Guard cells are always surrounded by subsidiary cells.
Sol: Stomata is the epidermal surface of the leaf exhibits 1,000 to 60,000 minute openings. The stomata are bordered by two specialized epidermal cells- the guard cells which in some cases are accompanied by subsidiary cells. The walls of guard cells are unevenly thickened. Each guard cell has thick, inelastic inner wall and thin, elastic outer wall. Stomatal aperture is present in between the guard cells and they are not always surrounded by accessory cells or subsidiary cells.

193) Ans: **A)** Mitochondrial matrix
Sol: The mitochondrial matrix contains a highly concentrated mixture of hundreds of enzymes, including those required for the Krebs' cycle and for the oxidation of pyruvate and fatty acids. So the mitochondrial matrix contains aconitase, iso-citric dehydrogenase, synthetase, fumarase enzyme and also many more.

194) Ans: **A)** They are interbreeding
Sol: Uniform interbreeding population or group of individuals that freely interbreed among themselves, constitute a species.

195) Ans: **C)** Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
Sol: Fertilized ovules ripen into seeds. The seeds are covered by fruits. A fruit is technically a ripened ovary. Gymnosperms contain ovules but they lack ovary, therefore, seeds are formed but fruits are not formed. Angiosperms contain both ovule and ovary and therefore, are seed bearing fruit forming plants.

196) Ans: **C)** Nicotinamide adenine dinucleotide phosphate

197) Ans: **C)** Both (A) and (B)
Sol: Modern theory of origin of life include chemical evolution by which pre cell is formed and biological evolution by which pre - cell transformed into living cell

198) Ans: **B)**

A	B	C	D
Transition state	Potential energy	Activation energy without enzyme	Activation with enzym

199) Ans: **B)** cortisol
Sol: Excess of cortisol hormones causes Cushing's syndrome. ushing's syndrome is caused by excess of cortisol which may be because of a tumour of adrenal cortex which characterized by high blood sugar, appearance of sugar in urine, rise in plasma Na^+, fall in plasma K^+, rise in blood volume, high blood pressure, obesity, wasting of muscles of thighs and pectoral and pelvic girdles.

200) Ans: **B)** rete testis to vas deferens
Sol: The seminiferous tubules are closed at one end but on the other side they join to a network the rete testis from where fine ciliated ductules, the vasa efferentia arise and cilia help in conducting sperms. The rete testis is a network of tubules conducting sperms from the seminiferous tubules of the testis to the vasa efferentia.