

Sharath Gore

Biology Mock Test 3 2022-23

Time : 75 Min

Bio : Full Portion Paper

Marks : 400

101) The release of _____ is mainly stimulated by the GnRH secreted from hypothalamus.

- A) aldosterone from adrenals
- B) ADH from posterior pituitary
- C) FSH and LH from anterior pituitary
- D) thyroxin from thyroid gland

102) In citric acid cycle, when decarboxylation occurs?

- A) Citric acid converts to α -ketoglutaric acid
- B) Succinic acid converts to malic acid
- C) Oxaloacetic acid converts to citric acid.
- D) Malic acid converts to oxaloacetic acid

103) Edible part of Apple is

- A) Calyx
- B) Mesocarp
- C) Thalamus
- D) Pericarp

104) In which unit the ozone hole is measured?

- A) Decibel
- B) Dobson units (DU)
- C) Cubic centimeter
- D) Parts per million (PPM)

105) Skeletal muscle develops from

- A) Endoderm
- B) Mesoderm
- C) Ectoderm
- D) All of the above

106) Actin filament is made up of

- A) Actin, troponin and tropomyosin
- B) Actin, troponin
- C) Actin, tropomyosin
- D) Myosin, troponin

107) Discovery of Emerson effect has clearly shown the existence of

- A) Photo respiration
- B) Photo phosphorylation
- C) Light and dark reactions in photosynthesis
- D) Two distinct photochemical reactions or processes

108) Which of the following is not involved in the fertilization of fern?

- A) Water
- B) Pollen tube
- C) Archegonia
- D) Flagellated sperms

109) Which of the following is not concerned with viruses

- A) Viruses can be grown in sugary liquid
- B) Viruses can not use oxygen for respiration

- C) Viruses multiply only in living host cell
- D) Viruses are made up of nucleic acid and proteins

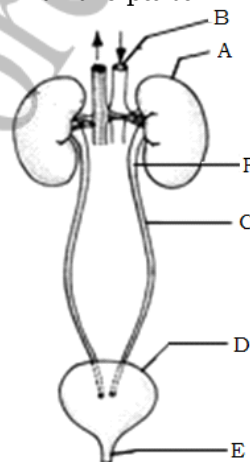
110) In angiosperms, lateral roots arise from

- A) Cortex
- B) Endodermis
- C) Pericycle
- D) Epiblemma

111) Which of the following substances is totally reabsorbed through renal tubules?

- A) K
- B) Na
- C) H_2O
- D) $C_6H_{12}O_6$

112) In the diagram of excretory system of human beings given below, different parts have been indicated by alphabets; choose the answer in which these alphabets have been correctly matched with the parts which they represent



- A) A = Kidney, B = Abdominal aorta, C = Ureters, D = Urinary bladder, E = Urethra, F = Renal pelvis
- B) A = Kidney, B = Abdominal aorta, C = Urethra, D = Urinary bladder, E = Ureters, F = Renal pelvis
- C) A = Kidney, B = Abdominal aorta, C = Urethra, D = Urinary bladder, E = Renal pelvis, F = Ureters
- D) A = Kidney, B = Renal pelvis, C = Urethra, D = Urinary bladder, E = Ureters, F = Abdominal aorta

113) How many nucleotides are present in one turn of DNA helix?

- A) 9 pairs
- B) 10 pairs
- C) 8 pairs
- D) 4 pairs

114) When red blood corpuscles containing both A and B antigens are mixed with your blood serum, they agglutinate. so what is your blood group?

- A) B
- B) O
- C) A
- D) AB

115) Conversion of starch to organic acid is essential for

- A) Stomatal closure
- B) Stomatal opening
- C) Stomatal growth
- D) Stomatal initiation

116) Statement 1 : ER acts as a circulatory system.

Statement 2 : ER functions as cytoskeleton

- A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) Both the statement 1 and statement 2 are false

117) Cockroach searches its food with the help of.....

- A) Walking legs
- B) Mandibles
- C) Eye
- D) Antennae

118) Root is distinguishable from stem in

- A) Having root hairs
- B) Having a root cap
- C) Absence of nodes and internodes
- D) All of these

119) Statement 1 : Gustatoreceptors are present in the mammalian tongue.

Statement 2 : Taste buds act as the gustatoreceptors.

- A) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- B) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) Both the statement 1 and statement 2 are false

120) _____ is a germination of seed within fruit.

- A) Ovipary
- B) Vivipary
- C) Epigeal
- D) Hypogeal

121) Lenticels are involved in _____ mechanism.

- A) transpiration
- B) food transport
- C) photosynthesis
- D) none of the above

122) Statement 1: Living organisms are regarded as closed systems.

Statement 2: Energy of living organisms cannot be lost or gained from external environment.

- A) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
- B) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
- C) Both Statement 1 and Statement 2 are false
- D) The Statement 1 is false but the Statement 2 is true

123) The animal species controlling the ecosystems functioning is called as

- A) pioneer species
- B) edge species
- C) keystone species
- D) umbrella species

124) _____ is not an advantages of mycorrhiza.

- A) Nitrogen fixation
- B) Resistance to root borne pathogens
- C) Phosphorus absorption
- D) Tolerance to salinity and drought

125) Statement 1 : Plasmids are double - stranded extra - chromosomal DNA.

Statement 2 : Plasmids are possessed by eukaryotic cells.

- A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) Both the statement 1 and statement 2 are false

126) Mark the incorrect statement.

- A) Species diversity increases as we move away from the equator towards the poles.
- B) The historic convention on biological diversity was held in 1992.
- C) Lantana and Eichhornia are invasive weed species in India.
- D) Stellar's sea cow and passenger pigeon got extinct due to over exploitation by man.

127) In the process of osmosis, volume of solvent

- A) Decreases
- B) Increases
- C) Remains same
- D) Volume is not related in osmosis

128) Heterospory and seed habit are often exhibited by a plant possessing (1997)

- A) petiole
- B) ligule
- C) bract
- D) spathe.

129) Different types of chromosomes can be recognised by the position of the following separating the two arms

- A) Genes
- B) Centromere
- C) Spindle
- D) Nucleus

130) Pollination occurs when a pollen grain

- A) Matures and has three nuclei
- B) Lands on a stigma
- C) Releases its pollen tube nucleus
- D) Releases its sperm nuclei

131) Hormone primarily connected with cell division is (1991, 1988)

- A) IAA
- B) NAA
- C) cytokinin/zeatin
- D) gibberellic acid

132) Energy released during movement of electron through the photosystems in photosynthesis is used to drive protons across the membrane against concentration gradient. It results in the protons accumulate in

- A) thylakoid lumen
- B) stroma
- C) intrathylakoid space
- D) Both (a) and (c)

133) Which of the following is a purine?

- A) Guanine
- B) Prokaryotes
- C) Thymine
- D) Uracil

134) Statement 1 : Cell secretion does not occur in bacteria.

Statement 2 : Golgi complex is absent in bacteria.

- A) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- B) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) The statement 1 is false but statement 2 is true

135) Which transgenic food crop may help in solving the problem of night blindness in developing countries?

- A) Golden rice
- B) Flavr Savr tomatoes
- C) Bt soyabean
- D) Starlink maize

136) The Air (Prevention and Control of Pollution) Act was amended in 1987 to include ____ as pollutant.

- A) dust
- B) noise

C) water

D) none of these

137) Secondary lysosomes are also called

- A) Heterophagosomes
- B) Residual body
- C) Lipofuscin granules
- D) Autophagic vacuoles

138) In a man, abducens nerve is injured. Which one of the following functions will be affected? (2005)

- A) Movement of the eyeball
- B) Movement of the tongue
- C) Swallowing
- D) Movement of the neck

139) The pyramid that cannot be inverted in a stable ecosystem, is pyramid of

- A) Biomass
- B) Energy
- C) Number
- D) All the above

140) The main role of bacteria in the carbon cycle involves

- A) Chemosynthesis
- B) Photosynthesis
- C) Assimilation of nitrogenous compounds
- D) Digestion or breakdown of organic compounds

141) In a dorsiventral leaf, location of palisade tissue and phloem respectively are

- A) Adaxial and adaxial
- B) Adaxial and abaxial
- C) Abaxial and abaxial
- D) Abaxial and adaxial

142) DNA strands are antiparallel because of the presence of

- A) Peptide bonds
- B) H-bonds
- C) Disulfide bonds
- D) Phosphate-diester bonds

143) The process of conversion of excess glucose into glycogen is known as

- A) oogenesis
- B) glycogenesis
- C) gluconeogenesis
- D) glycolysis

144) Anxiety and eating spicy food together in an otherwise normal human, may lead to (2012)

- A) indigestion
- B) jaundice
- C) diarrhoea
- D) vomiting

145) Spermathecal pores of Pheretima are present in

- A) 6/7, 7/8, 8/9 and 9/10
- B) 5/6, 6/7, 7/8 and 8/9
- C) 1/2, 2/3, 3/4 and 4/5

D) 14/15, 15/16, 16/17 and 17/18

146) Yeast is divided under the class

- A) Zygomycetes
- B) Ascomycetes
- C) Deuteromycetes
- D) Basidiomycetes

147) Point out the correct statements.

- A) During inspiration external intercostal muscles and diaphragm contract.
- B) Eupnea is slow breathing.
- C) Coryza is caused by human corona virus.
- D) Cyanosis means collapse of alveoli.

148) Find the correct type of muscle present in respective organ.

- A) Upper arm is smooth muscle and fusiform in shape
- B) Heart is involuntary and unstriated smooth muscle
- C) Thigh is striated and voluntary
- D) Intestine is striated and involuntary

149) By which one of the following expresses an exponential growth in plants?

- A) $L_e = L_t rt$
- B) $L_t = L_0 + rt$
- C) $W_1 = W_0 e^{rt}$
- D) $W_1 = W_0 e^{rt}$

150) Child receiving antibodies from mother is an example for

- A) active immunity
- B) passive immunity
- C) normal immunity
- D) Both (A) and (B)

151) The giant algae or sea weeds belong to class

- A) Rhodophyceae
- B) Phaeophyceae
- C) Chlorophyceae
- D) Xanthophyceae

152) DNA replication takes place in

- A) S phase
- B) G_1 phase
- C) G_2 phase
- D) Mitotic phase

153) Which one of the following groups of structures/organs have similar function?

- A) Nephridia in earthworm, Malpighian tubules in cockroach and urinary tubules in rat
- B) Typhlosole in earthworm, intestinal villi in rat and contractile vacuole in Amoeba
- C) Antennae of cockroach, tympanum of frog and clitellum of earthworm
- D) Incisors of rat, gizzard (proventriculus) of cockroach and tube feet of starfish

154) If pH of blood is artificially changed to 8, what is most likely to happen?

A) The carbonic anhydrase will be completely inhibited

B) The carbon dioxide will not be released from carbonic acid and carbonates

C) It will generate carbon monoxide and the animal will die of carbon monoxide poisoning

D) The tissues will not get oxygen as oxyhaemoglobin will not dissociate into oxygen and haemoglobin

155) Match the following nutrition/vitamin deficiencies in column I with causes/deficiencies in column II and choose the correct option from the answer key

	Column I		Column II
(a)	Kwashiorkor	(p)	Iron
(b)	General Anaemia	(q)	Menadione
(c)	Dermatitis	(r)	Protein
(d)	Marasmus	(s)	Pyridoxin
(e)	Bleeding	(t)	Biotin

A) (a) - (t), (b) - (q), (c) - (r), (d) - (s), (e) - (p)

B) (a) - (p), (b) - (t), (c) - (q), (d) - (r), (e) - (s)

C) (a) - (q), (b) - (r), (c) - (s), (d) - (p), (e) - (t)

D) (a) - (r), (b) - (p), (c) - (t), (d) - (s), (e) - (q)

156) What is common in whale, bat and rat? (1993)

- A) Absence of neck
- B) Muscular diaphragm between thorax and abdomen
- C) Extra-abdominal testes to avoid high temperature of body
- D) Presence of external ears

157) Biogas is good substitute for

- A) Charcoal
- B) Petroleum and oil
- C) Coal
- D) Fuel wood

158) Determine the incorrect statements of the following:

- i) Birth control pills are likely to cause cardiovascular problems
 - ii) Surrogate mother is the woman who substitutes or takes the place of the real mother to nurse the embryo
 - iii) Numerous children have been produced by in vitro fertilization but with some abnormalities
 - iv) Woman plays a key role in the continuity of the family and human species
 - v) Foetal sex determination test should not be banned
- A) (i) and (ii)
 - B) (iii) and (v)
 - C) (ii) and (iv)
 - D) None of these

159) Which one of the following makes use of RNA template to synthesise DNA? (2005)

- A) DNA polymerase
- B) RNA polymerase

- C) Reverse transcriptase
D) DNA dependant RNA polymerase

160) Which kind of epithelium forms the inner walls of blood vessels?

- A) Columnar epithelium
B) Cuboidal epithelium
C) Ciliated columnar epithelium
D) Squamous epithelium

161) Which of the following pollutants are removed by a scrubber in the exhaust of a chemical industrial plant?

- A) Particulate matter of the size 5 micrometers or above
B) Gases like sulphur dioxide
C) Gases like nitrous oxide
D) Gases like ozone or methane

162) The excitatory neurotransmitter involved in the transmission of impulse at the neuro-muscular junction is

- A) serotonin
B) epinephrine
C) acetylcholine
D) glycine

163) Pacinian corpuscles occur in the skin of certain parts of body in mammals. What are these?

- A) Pain receptors
B) Type of glands
C) Naked tactile receptors
D) Encapsulated pressure receptors

164) Mark the correct statement.

- A) A nitrogenous base is linked to pentose sugar through phosphodiester linkage.
B) Haploid content of human DNA is 4.6×10^6 bp.
C) X-ray diffraction data of Maurice Wilkins and Rosalind Franklin was the basis of Watson and Crick's DNA model.
D) DNA as an acidic substance was first identified by Watson and Crick.

165) Which of the following figures represents the correct method of pressing plants to form herbarium sheets?



- A) Both figures A and B as folding or unfolding does not matter
B) figure B as every plant part is unfolded
C) Figure A as the plant parts are folded
D) none of these

166) Which one of the following did not proposed by the Mendel?

- A) Segregation
B) Incomplete dominance
C) Dominance
D) Independent assortment

167) Secondary succession occurs on

- A) Lumbered lands
B) Burnt lands
C) Cut wood lands
D) All of these

168) Find the statements which is not true about somatic embryogenesis.

- A) Somatic embryo is induced usually by an auxin such as 2, 4-D.
B) Somatic embryos can develop from microspores.
C) The pattern of development of a somatic embryo is comparable to that of a zygotic embryo.
D) A somatic embryo develops from a somatic cell.

169) Synapses store

- A) Inhibitory chemicals
B) Stimulating chemicals
C) Conducting chemicals
D) All of these

170) Antibody formation is stimulated by antigen this is called as

- A) immunity
B) autogenicity
C) auto immunity
D) passive immunity

171) The enzyme which converts proteins into peptones is

- A) Pepsin
B) Erypsin
C) Trypsin
D) Lipase

172) _____ parts of heart first receives deoxygenated blood.

- A) Left auricle
B) Left ventricle
C) Right auricle
D) Right ventricle

173) The twenty third pair of chromosomes in man is known as

- A) Heterosome
B) Chromatid
C) Autosome
D) Gene

174) Heterocysts are found in certain

- A) Mycoplasmas
B) Cyanobacteria
C) Bacteria
D) Viruses

175) One set of plants of a species was grown at 12 hours day and 12 hours night period cycles and it flowered while for the other set of the same plant, night phase was interrupted by flash of light and it

did not produce flower. Under _____ categories you will place this plant.

- A) darkness neutral plant
- B) long day plant
- C) day neutral plant
- D) short day plant

176) When fats are respiratory substrate, what would be the value of R.Q.?

- A) Approx. 1.0
- B) Approx. 0.7
- C) More than 1.0
- D) None of these

177) Which structure is not found in the leaves of a bean plant?

- A) Chloroplast
- B) Guard cell
- C) Phloem
- D) Lenticel

178) Mesoderm gives rise to all the structures except

- A) Gonads
- B) Nervous system
- C) Circulatory system
- D) Muscular system

179) Grain colour in wheat is determined by three pairs of polygenes. Following the cross AABBCC (dark colour) × aabbcc (light colour), in F₂ generation what proportion of the progeny likely to resemble either parent?

- A) Half
- B) One third
- C) Less than 5 per cent
- D) None

180) The root apex is sub terminal because it

- A) Is covered by tunica cells
- B) Has many corpus cells
- C) Is covered by root hairs
- D) Is covered by root cap

181) The term that can be used for any taxonomic rank is

- A) class
- B) taxon
- C) cohort
- D) family

182) Mark the incorrect statements from the following.

- a. In majority of organisms, male gamete is motile and female gamete is non-motile (stationary).
- b. In algae and fungi, both male and female gametes are non-motile.
- c. In seed plants, pollen grains are the carrier of male gametes and ovule has the egg.
- d. In dioecious plants, pollination facilitates transfer of pollen grains to the stigma.
- e. In monoecious animals, since male and female gametes are formed in different individuals, the organism must evolve special mechanism for

gamete transfer.

- A) a and d
- B) b and e
- C) c and e
- D) b and c

183) Study the statement with respect to Eichhornia.

Statement X: It drains off oxygen from water and is observed growing in standing water.

Statement Y: It is an indigenous species of our country.

- A) Only statement X is correct and Y is wrong.
- B) Both statement X and Y are correct.
- C) Both statement X and Y are wrong.
- D) Only statement Y is correct and X is wrong.

184) Which is the specific characters of the flowers of Canna?

- A) Irregular and bilateral symmetry
- B) Actinomorphic and radial symmetry
- C) Irregular and zygomorphic
- D) Irregular and asymmetric

185) The nerve like modified muscle in the right auricle is known as

- A) Pacemaker
- B) Lymph node
- C) Bulbus arteriosus
- D) Atrio-ventricular node

186) Smooth muscles are not

- A) Spindle shaped
- B) Multinucleated
- C) Very simple in structure
- D) Under control of autonomic nervous system

187) Islets of Langerhans are present in

- A) kidney cortex
- B) anterior pituitary
- C) spleen
- D) endocrine pancreas

188) If _____, then only fertilisation in humans is practically feasible.

- A) the sperms are transported into cervix within 48 hrs of release of ovum in uterus
- B) the ovum and sperms are transported simultaneously to ampullary -isthmic junction of the cervix
- C) the sperms are transported into vagina just after the release of ovum in Fallopian tube
- D) the ovum and sperms are transported simultaneously to ampullary -isthmic junction of the Fallopian tube

189) Germination of pollen grain on the stigma is

- A) In vitro germination
- B) In vivo germination
- C) Autogamy
- D) None of these

190) Choose the correct option: Cattle fed with spoiled hay of sweet clover which contains dicumarol

- A) catch infections easily
 B) are healthier due to a good diet
 C) may suffer vitamin K deficiency and prolonged bleeding
 D) may suffer from beri beri due to deficiency of B vitamins.

191) Identify the correct statements.

- A) Species diversity, in general, increases from poles to the equator.
 B) Conventional taxonomic methods are equally suitable for higher plants and microorganisms.
 C) There are about 25000 known species of plants in India.
 D) India's share of global species diversity is about 18%.

192) Point out false statements for stomatal apparatus.

- A) Guard cells invariably possess chloroplasts and mitochondria.
 B) Guard cells are always surrounded by subsidiary cells.
 C) Inner wall of guard cells are thick.
 D) Stomata are involved in gaseous exchange.

193) Most enzymes that take part in Krebs' cycle are located in which part?

- A) Mitochondrial matrix
 B) Cytoplasm
 C) Plasmamembrane
 D) Inner mitochondrial membrane

194) Which of the following statements is true regarding individuals of same species?

- A) They are interbreeding
 B) They live in different niche
 C) They live in same niche
 D) They live in different habitate

195) Statement 1 : Fertilized ovule forms seed.
 Statement 2 : Ripened ovary forms fruit.

- A) Both the statement 1 and statement 2 are false
 B) The statement 1 is true but the statement 2 is false
 C) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
 D) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1

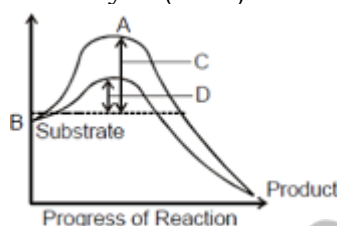
196) The full expansion of NADP is

- A) Nicotinamide adenosine diphosphate
 B) Nicotinamide adenine diphosphate
 C) Nicotinamide adenine dinucleotide phosphate
 D) Nicotinamide adenosine dinucleotide phosphate

197) Modern theory of origin of life includes

- A) Biological evolution
 B) Chemical evolution
 C) Both (A) and (B)
 D) None of these

198) The figure given below shows the conversion of a substrate into product by an enzyme. In which one of the four options (A-D) the components of reaction labelled as A, B, C and D are identified correctly? (2010)



A)

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

B)

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

C)

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

D)

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

199) Excess of _____ hormones causes Cushing's syndrome.

- A) thyroxine
 B) cortisol
 C) noradrenaline
 D) adrenaline

200) Vasa efferentia are the ductules arises from

- A) epididymis to urethra
 B) rete testis to vas deferens
 C) vas deferens to epididymis
 D) testicular lobules to rete testis