



ZOOLOGY

(Question Paper with Answer)

Paper Code : F6

Test Date : 7.05.2023

SECTION-A

151. Given below are two statements:

Statement-I : A protein is imagined as a line, the left end represented by first amino acid (C-terminal) and the right end represented by last amino acid (N-terminal)

Statement-II : Adult human haemoglobin consists of 4 subunits (two subunits of α type and two subunits of β type)

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both statement I and Statement II are false.
- (2) Statement I is true but Statement II is false.
- (3) Statement I is false but Statement II is true.
- (4) Both statement I and Statement II are true.

Ans. (3)

152. Radial symmetry is NOT found in adults of phylum _____.

- (1) Hemichordata
- (2) Coelenterata
- (3) Echinodermata
- (4) Ctenophora

Ans. (1)

153. Which of the following statements are correct regarding female reproductive cycle?

- A. In non-primate mammals cyclical changes during reproduction are called oestrus cycle
- B. First menstrual cycle begins at puberty and is called menopause
- C. Lack of menstruation may be indicative of pregnancy.
- D. Cyclic menstruation extends between menarche and menopause.

Choose the most appropriate answer from the options given below :

- (1) A and B only
- (2) A, B and C only
- (3) A, C and D only
- (4) A and D only

Ans. (3)

154. Given below are statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Nephrons are of two types: Cortical & Juxta medullary, based on their relative position in cortex and medulla.

Reason R: Juxta.medullary nephrons have short loop of Henle whereas, cortical nephrons have longer loop of henle.

In the light of the above statements, choose the correct answer from the option given below :

- (1) Both A and R are true but R is NOT the correct explanation of A.
- (2) A is true but R is false.
- (3) A is false but R is true.
- (4) Both A and R are true and R is the correct explanation of A.

Ans. (2)



155. Match List I with List II with respect to human eye.

List-I

- A. Fovea
- B. Iris
- C. Blind spot
- D. Sclera

List-II

- I. Visible coloured portion of eye that regulates
- II. External layer of eye formed of dense
- III. Point of greatest visual acuity or resolution.
- IV. Point where optic nerve leaves the eyeball and photoreceptor cells are absent.

Choose the correct answer from the options given below:

- (1) A-IV, B-III, C-II, D-I
- (3) A-II, B-I, C-III, D-IV

- (2) A-I, B-IV, C-III, D-II
- (4) A-III, B-I, C-IV, D-II

Ans. (4)

156. Which of the following are NOT considered as the part of endomembrane system ?

- A. Mitochondria
- B. Endoplasmic Reticulum
- C. Chloroplasts
- D. Golgi complex
- E. Peroxisomes

Choose the most appropriate answer from the options given below:

- (1) A, C and E only
- (2) A and D only
- (3) A, D and E only
- (4) B and D only

Ans. (1)

157. Broad palm with single palm crease is visible in a Person suffering from :

- (1) Turner's syndrome
- (2) Klinefelter's syndrome
- (3) Thalassemia
- (4) Down's syndrome

Ans. (4)

158. Match List I with List II.

List I

- A. P - wave
- B. Q - wave
- C. QRS complex
- D. T - wave

List II

- I. Beginning of systole
- II. Repolarisation of ventricles
- III. Depolarisation of atria
- IV. Depolarisation of ventricles

Choose the correct answer from the options given below:

- (1) A-IV, B-III, C-II, D-I
- (3) A-I, B-II, C-III, D-IV

- (2) A-II, B-IV, C-I, D-III
- (4) A-III, B-I, C-IV, D-II

Ans. (4)

159. Which one of the following common sexually transmitted diseases is completely curable when detected early and treated properly ?

- (1) Gonorrhoea
- (2) Hepatitis-B
- (3) HIV Infection
- (4) Genital herpes

Ans. (1)



160. Match List I with List II.

List I
(Cells)

- A. Peptic cells
- B. Goblet cells
- C. Oxyntic cells
- D. Hepatic cells

List II
(Secretion)

- I. Mucus
- II. Bile juice
- III. Proenzyme pepsinogen
HCl and intrinsic factor
for absorption of vitamin B₁₂

Choose the correct answer from the options given below:

(1) A-II, B-I, C-III, D-IV

(2) A-III, B-I, C-IV, D-II

(3) A-II, B-IV, C-I, D-III

(4) A-IV, B-m, C-II, D-I

Ans. (2)

161. Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Endometrium is necessary for implantation of blastocyst.

Reason R : In the absence of fertilization, the corpus luteum degenerates that causes disintegration of endometrium.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both A and R are true but R is NOT the correct explanation of A.

(2) A is true but R is false.

(3) A is false but R is true.

(4) Both A and R are true and R is the correct explanation of A

Ans. (1)

162. Which of the following is not a cloning vector?

(1) YAC

(2) pBR322

(3) Probe

(4) BAC

Ans. (3)

163. Match List I with List II.

List I

- A. Taenia
- B. Paramoecium
- C. Periplaneta
- D. Pheretima

List-II

- I. Nephridia
- II. Contractile vacuole
- III. Flame cells
- IV. Urecose gland

Choose the correct answer from the options give below:

(1) A-I, B-II, C-IV, D-III

(2) A-III, B-II, C-IV, D-I

(3) A-II, B-I, C-IV, D-III

(4) A-I, B-II, C-m, D-IV

Ans. (2)



164. Given below are two statements:

Statement I: Ligaments are dense irregular tissue.

Statement II : Cartilage is denser regular tissue .

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both Statement I and Statement II are false.
- (2) Statement I is true but Statement II is false.
- (3) Statement I is false but Statement II is true.
- (4) Both Statement I and Statement II are true.

Ans. (1)

165. Which of the following functions is carried out by cytoskeleton in a cell?

- (1) Protein synthesis
- (2) Motility
- (3) Transportation
- (4) Nuclear division

Ans. (2)

166. Match List I with List -II

List-I

- A. Gene 'a'
- B. Gene 'y'
- C. Gene 'y'
- D. Gene 'z'

List-II

- I. β -galactosidase
- II. Transacetylase
- III. Permease
- IV. Repressor protein

- (1) A-II, B-III, C-IV, D-I
- (3) A-III, B-I, C-IV, D-II

- (2) A-III, B-IV, C-I, D-II
- (4) A-II, B-I, C-IV, D-III

Ans. (1)

167. Which of the following statements is correct?

- (1) Biomagnification refers to increase in concentration of the toxicant at successive trophic levels
- (2) Presence of large amount of nutrients in water restricts 'Algal Bloom'
- (3) Algal Bloom decreases fish mortality.
- (4) Eutrophication refers to increase in domestic sewage and waste water in lakes.

Ans. (1)

168. Which one of the following symbols represents mating between relatives in human pedigree analysis?

- (1)
- (2)
- (3)
- (4)

Ans. (1)



169. Once the undigested and unabsorbed substances enter the caecum, their backflow is prevented by :
- (1) Ileo - caecal valve (2) Gastro - oesophageal sphincter
(3) Pyloric sphincter (4) Sphincter of Oddi

Ans. (1)

170. Which one of the following techniques does not serve the purpose of early diagnosis of a disease for its early treatment ?

- (1) Serum and Urine analysis
(2) Polymerase Chain Reaction (PCR) technique
(3) Enzyme Linked Immuno-Sorbent Assay (ELISA) technique
(4) Recombinant DNA Technology

Ans. (1)

171. Given below are two statements:

Statement I: Low temperature preserves the enzyme in a temporarily inactive state whereas high temperature destroys enzymatic activity because proteins are denatured by heat

Statement II: When the inhibitor closely resembles the substrate in its molecular structure and inhibits the activity of the enzyme, it is known as competitive inhibitor.

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both Statement I and Statement II are false.
(2) Statement I is true but Statement II is false.
(3) Statement I is false but Statement II is true.
(4) Both Statement I and Statement II are true.

Ans. (4)

172. Match List I with List II.

List I

(Type of Joint)

- A. Cartilaginous Joint
B. Ball and Socket Joint
C. Fibrous Joint
D. Saddle Joint

List-II

(Found between)

- I. Between flat skull bones
II. Between adjacent vertebrae in vertebral column
III. Between carpal and metacarpal of thumb
IV. Between Humerus and Pectoral girdle

Choose the correct answer from the options given below:

- (1) A-II, B-IV, C-I, D-III (2) A-I, B-IV, C-III, D-II
(3) A-II, B-IV, C-III, D-I (4) A-III, B-I, C-II, D-IV

Ans. (1)



173. Given below are two statements:

Statement I : Vas deferens receives a duct from seminal vesicle and opens into uretra as the ejaculatory duct.

Statement II : The activity of the cervix is called cervical anal which along with veginal forms birth canal.

- (1) Both Statement I and Statement II are false.
- (2) Statement I is correct but Statement II is false.
- (3) Statement I incorrect but Statement II is true.
- (4) Both Statement I and Statement II are true.

Ans. (4)

174. In which blood corpuscles, the HIV undergoes replication and produces progeny viruses ?

- (1) B-lymphocytes
- (2) Basophils
- (3) Eosinophils
- (4) T_H Cells

Ans. (4)

175. Match List I with List II.

List I

- A. Heroin
- B. Marijuana
- C. Cocaine
- D. Morphine

List II

- I. Effect on cardiovascular system
- II. Slow down body function
- III. Painkiller
- IV. Interfere with transport of dopamine

Choose the correct answer from the options given below:

- (1) A-I, B-II, C-III, D-IV
- (2) A-IV, B-III, C-II, D-I
- (3) A-III, B-IV, C-I, D-II
- (4) A-II, B-I, C-IV, D-III

Ans. (4)

176. Vital capacity of lung is _____.

- (1) IRV + ERV + TV + RV
- (2) IRV + ERV + TV - RV
- (3) IRV + ERV + TV
- (4) IRV + ERV

Ans. (3)

177. Select the correct group/set of Australian Marsupials exhibiting adpative radiation.

- (1) Numbat, Spotted cuscus, flying phalanger
- (2) Mole, flying squirrel, Tasmanian tiger cat
- (3) Lemur, Anteater, Wolf
- (4) Tasmaian wolf, Bobcat, Marsupial Mole

Ans. (1)



178. Match List I with List II

List I

- A. CCK
- B. GIP
- C. ANF
- D. ADH

List II

- I. Kidney
- II. Heart
- III. Gastric gland
- IV. Pancreas

Choose the correct answer from the options given below:

(1) A-III, B-II, C-IV, D-I

(2) A-II, B-IV, C-I, D-III

(3) A-IV, B-II, C-III, D-I

(4) A-IV, B-III, C-II D-I

(1)

(2)

(3)

(4)

Ans. (4)

179. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Aminocentesis for sexdetermination is one of the strategies of Reproductive and Child Health Care Programme.

Reason R: Ban on amniocentesis checks increasing menace of female foeticide.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both A and R are true and R is NOT the correct explanation of A.

(2) A is true but R is false.

(3) A is false but R is true.

(4) Both A and R are true and R is the correct explanation of A

Ans. (3)

180. Given below are two statements:

Statement I: RNA mutates at a faster rate.

Statement II: Viruses having RNA genome and shorter life span mutate and evolve faster.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both Statement I and Statement II are false.

(2) Statement I is true but Statement II is false.

(3) Statement I false but Statement II is true.

(4) Both Statement I and Statement II are true.

Ans. (4)

181. Match List I with List II.

List I

- A. Vasectomy
- B. Coitus
- C. Cervical caps
- D. Saheli

List II

- I. Oral method
- II. Barrier Method interruptus
- III. Surgical method
- IV. Natural method

Choose the correct answer from the options given below:



(1) A-III, B-IV, C-II, D-I

(2) A-II, B-III, C-I, D-IV

(3) A-IV, B-II, C-I, D-III

(4) A-III, B-I, C-IV, D-II

Ans. (1)

182. Given below are two statements:

Statement I: Electrostatic precipitator is most widely used in thermal power plant.

Statement II: Electrostatic precipitator in thermal power plant removes ionising radiations In the light of the above statements, choose the most appropriate answer from the options given below:

(1) Both Statement I and Statement II are incorrect.

(2) Statement I is correct but Statement II is incorrect.

(3) Statement I incorrect but Statement II is correct.

(4) Both Statement I and Statement II are correct.

Ans. (2)

183. Given below are two statements:

Statement I: In prokaryotes, the positively charged DNA is held with some negatively charged proteins in a region called nucleoid,

Statement II: In eukaryotes, the negatively charged DNA is wrapped around the positively charged histone octamer to form nucleosome

In the light of the above statements, choose the correct answer from the options given below:

(1) Both Statement I and Statement II are false.

(2) Statement I is correct but Statement II is false.

(3) Statement I incorrect but Statement II is true.

(4) Both Statement I and Statement II are true

Ans. (3)

184. Match List I with List II.

List I

List II

A. Ringworm

I. Haemophilus influenzae

B. Filariasis

II. Trichophyton

C. Malaria

III. Wuchereria bancrofti

D. Pneumonia

IV. Plasmodium vivax

Choose the correct answer from the options given below:

(1) A-II, B-III, C-I, D-IV

(2) A-II, B-II, C-I, D-IV

(3) A-III, B-II, C-IV, D-I

(4) A-II, B-III, C-IV, D-I

Ans. (4)



185. Match List I with List II.

List I

(Interacting species)

- A. A Leopard and a Lion in a forest/grassland
- B. A Cuckoo laying egg in a Crow's nest
- C. Fungi and root of a higher plant in Mycorrhizae
- D. A cattle egret and a Cattle in a field

List II

(Name of Interaction)

- I. Competition
- II. Brood parasitism
- III. Mutualism
- IV. Commensalism

Choose the correct answer from the options given below:

- (1) A-I, B-II, C-IV, D-III
- (3) A-II, B-III, C-I, D-IV

- (2) A-III, B-IV, C-I, D-II
- (4) A-I, B-II, C-III, D-IV

Ans. (4)

SECTION-B

186. Which of the following statements are correct ?

- A. Basophils are most abundant cells of the total WBCs
- B. Basophils secrete histamine and heparin
- C. Basophils are involved in inflammatory response
- D. Basophils have kidney shaped nucleus
- E. Basophils are agranulocytes

Choose the correct answer from the options given below:

- (1) C and E only
- (2) B and C only
- (3) A and B only
- (4) D and E only

Ans. (2)

187. Match List I with List II.

List I

- A. Mast cells
- B. Inner surface of bronchiole
- C. Blood
- D. Tubular parts

List II

- I. Ciliated epithelium
- II. Areolar connective tissue
- III. Cuboidal epithelium
- IV. specialised of nephron connective tissue

Choose the correct answer from the options give below:

- (1) A-II, B-III, C-I, D-IV
- (3) A-III, B-IV, C-II, D-III

- (2) A-II, B-I, C-IV, D-III
- (4) A-I, B-II, C-IV, D-III

Ans. (2)



188. Select the correct statements.

- A. Tetrad formation is seen during Leptotene
- B. During Anaphase, the centromeres split and chromatids separate
- C. Terminalization takes place during Pachytene.
- D. Nucleolus, Golgi complex and ER are reforming during Telophase.
- E. Crossing over takes place between sister chromatids

Choose the correct of homologous chromosome the options given below:-

- (1) B and D only (2) A, C and E only (3) B and E only (4) A and C only

Ans. (1)

189. In cockroach, excretion is brought about by

- A. Malpighian tubules B. Ureteric gland C. Collateral Nephrocytes glands D. Fat body

Choose the correct answer from the options given below:

- (1) A, B and E only (2) B, C and D only (3) B and D only (4) A and E only

Ans. (2)

190. Given below are two statements:

Statement I: During G_0 phase of cell cycle, the cell is metabolically inactive.

Statement II: The centrosome undergoes duplication during S phase of interphase.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement I and Statement II are incorrect.
- (2) Statement I is correct but Statement II is incorrect.
- (3) Statement I is incorrect but Statement II is correct.
- (4) Both Statement I and Statement II are correct.

Ans. (3)

191. Select the correct statements with reference to chordates.

- A. Presence of a mid-dorsal, solid and double nerve cord.
- B. Presence of closed circulatory system.
- C. Presence of paired pharyngeal gill slits
- D. Presence of dorsal heart
- E. Triploblastic pseudocoelomate animals

Choose the correct answer from the animals options .

- (1) B and C only (2) B, D and E only (3) C, D and E only (4) A, C and D only

Ans. (1)



192. Match List I with List II.

List I

- A. Logistic growth
- B. Exponential growth
- C. Expanding age pyramid
- D. Stable age pyramid

List II

- I. Unlimited resource availability condition
- II. Limited resource availability condition
- III. The percent individuals of pre-reproductive age is largest followed by reproductive and post reproductive age groups
- IV. The percent individuals of pre-reproductives and reproductive age group are same

Choose the correct answer from the Options given below:

- (1) A-II, B-III, C-I, D-IV (2) A-II, B-IV, C-I, D-III (3) A-II, B-IV, C-III, D-I (4) A-II, B-I, C-m, D-IV

Ans. (4)

193. Which one of the coding following strand, is if the the sequence sequence on on mRNA formed 5' AUCGAUCGAUCGAUCG is as follows AUCG AUCG 3'?

- (1) 3' UAGCUAGCUAGCUAGCUAGCUAGC 5'
- (2) 5' QQATCGAT 3' GATCGATCG
- (3) 3' ATCGATCGATCGATCGATCGATCG 5'
- (4) 5' UAGCUAGCUAGCUAGCUAGCUAGC UAGC 3'

Ans. (2)

194. Which of the following is characteristic feature of cockroach regarding sexual dimorphism ?

- (1) Presence of anal styles (2) Presence of sclerites
- (3) Presence of anal cerci (4) Dark brown body colour and anal cerci

Ans. (1)

195. Which of the following statements are correct regarding skeletal muscle?

- A. Muscle bundles are held together by collagenous connective tissue layer called fascicle
- B. B. sarcoplasmic reticulum of muscle fibre is a store house of calcium ions.
- C. Striated appearance of skeletal muscle fibre is due to distribution pattern of actin and myosin proteins,
- D. M line is considered as functional unit of contraction called sarcomere

Choose the most appropriate answer from the options given below:

- (1) B and C only (2) A, C and D only (3) C and D only (4) A, B and C only

Ans. (1)

196. The unique mammalian characteristics are:

- (1) hairs, pinna and mammary glands
- (2) hairs, pinna and indirect developmen
- (3) pinna, monocondylic skull and mammary glands
- (4) hairs, tympanic membrane and mammary glands

Ans. (1)



197. Which one of the following is NOT an advantage of inbreeding?
- (1) It exposes harmful recessive genes that are eliminated by selection.
 - (2) Elimination of less desirable genes and due to it.
 - (3) It decreases the productivity of inbred population, after continuous inbreedings
 - (4) It decreases homozygosity.

Ans. (4/3)

198. The parts of human brain that helps in regulation of sexual behaviour, expression of excitement, pleasure, rage, fear etc. are :

- (1) Corpora quadrigemina & hippocampus
- (2) Brain stem & epithalamus
- (3) Corpus callosum and thalamus
- (4) Limbic system & hypothalamus

Ans. (4)

199. Which of the following statements are correct ?

- A. An excessive loss of body fluid from the body switches off osmoreceptors.
- B. ADH facilitates water reabsorption to prevent diuresis,
- C. ANF causes vasodilation.
- D. XPH causes increase in blood pressure.
- E. ADH is responsible for decrease in GFR

Choose the incorrect responsible answer for decrease from the inoptions given,below:

- (1) B, C and D only
- (2) A, B and E only
- (3) C, D and E only
- (4) A and B only

Ans. (1)

200. Which of the following are NOT under the control of thyroid hormone?

- A. Maintenance of water and electrolyte balance
- B. Regulation of basal metabolic rate
- C. Normal rhythm of sleep-wake cycle
- D. Development of immune systems
- E. Support the process of R.B.Cs formation

Choose the correct answer from the options given below:

- (1) B and C only
- (2) C and D only
- (3) D and E only
- (4) A and D only

Ans. (2)