NEET 2024 R4 Zoology Question Paper

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151. Match List-I with List-II

	List I		List II
A.	Fibrous joints	I.	Adjacent vertebrae, limited movement
B.	Cartilaginous joints	II.	Humerus and Pectoral girdle, rotational movement
C.	Hinge joints	III.	Skull, don't allow any movement
D.	Ball and socket joints	IV.	Knee, help in locomotion

Choose the correct answer from the options given below:

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

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

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

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

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152. Match List-I with List-II

List-I	Disease/Concept	List-II	Associated Pathogen/Factor
A	Common cold	I	Plasmodium
B	Haemozoin	II	Typhoid
C	Widal test	III	Rhinoviruses
D	Allergy	IV	Dust mites

Choose the correct answer from the options given below:

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

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

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

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

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153. Match List-I with List-II

	List I		List II
A.	Down's syndrome	I.	11^{th} chromosome
B.	α-Thalassemia	II.	'X' chromosome
C.	β-Thalassemia	III.	21^{st} chromosome
D.	Klinefelter's syndrome	IV.	16^{th} chromosome

Choose the correct answer from the options given below:

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

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

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

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

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154. Given below are two statements: one is labeled as Assertion (A) and the other is labeled as Reason (R):

Assertion A: FSH acts upon ovarian follicles in female and Leydig cells in male.

Reason R: Growing ovarian follicles secrete estrogen in females, while interstitial cells secrete androgen in male human beings.

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

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155. The "Ti plasmid" of *Agrobacterium tumefaciens* stands for

(1) Tumor independent plasmid

(2) Tumor inducing plasmid

(3) Temperature independent plasmid

(4) Tumour inhibiting plasmid

---

156. Given below are two statements:

Statement I: In the nephron, the descending limb of the loop of Henle is impermeable to

water and permeable to electrolytes.

Statement II: The proximal convoluted tubule is lined by simple columnar brush border epithelium and increases the surface area for reabsorption.

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

---

157. Match List-I with List-II

	List I (Sub Phases of Prophase I)		**List II (Specific Characters)**
A.	Diakinesis	I.	Synaptonemal complex formation
B.	Pachytene	II.	Completion of terminalisation of chiasmata
C.	Zygotene	III.	Chromosomes look like thin threads
D.	Leptotene	IV.	Appearance of recombination nodules

Choose the correct answer from the options given below:

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

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

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

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

---

158. Match List-I with List-II

	List I		**List II**
A.	Non-medicated IUD	I.	Multiload 375
B.	Copper releasing IUD	II.	Progestogens
C.	Hormone releasing IUD	III.	Lippes loop
D.	Implants	IV.	LNG-20

Choose the correct answer from the options given below:

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

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

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

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

---

159. Which of the following is not a steroid hormone?

(1) Testosterone

(2) Progesterone

(3) Glucagon

(4) Cortisol

---

160. Given below are some stages of human evolution.

Arrange them in correct sequence (Past to Recent).

A.Homo habilis

B.Homo sapiens

C.Homo neanderthalensis

D.Homo erectus

Choose the correct sequence of human evolution from the options given below:

(1) B-A-D-C

(2) C-B-D-A

(3) A-D-C-B

(4) D-A-C-B

---

161. Match List-I with List-II

List-I	Enzyme	List-II	Type of Bond Broken
A	Lipase	I	Peptide bond
B	Nuclease	II	Ester bond
C	Protease	III	. Glycosidic bond
D	Amylase	IV	Phosphodiester bond

Choose the correct answer from the options given below:

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

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

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

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

---

162. Given below are two statements:

Statement I: The presence or absence of the hymen is not a reliable indicator of virginity.

Statement II: The hymen is torn during the first coitus only.

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

---

163. Match List-I with List-II

List-I	Biological Component	List-II	Application/Effect
A	α-1 antitrypsin	I	Cotton bollworm
B	Cry IAb	II	ADA deficiency
C	Cry IAc	III	Emphysema
D	Enzyme replacement therapy	IV	Corn borer

Choose the correct answer from the options given below:

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

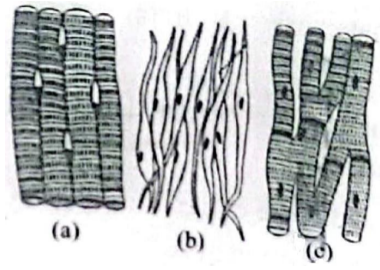
(2) A-III, B-IV, C-I, D-II

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

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

---

164. Three types of muscles are given as (a), (b), and (c). Identify the correct matching pair along with their location in the human body:



Name of muscle/location:

(1) (a) Skeletal - Triceps

(b) Smooth - Stomach

(c) Cardiac - Heart

(2) (a) Skeletal - Biceps

(b) Involuntary - Intestine

(c) Smooth - Heart

(3) (a) Involuntary - Nose tip

(b) Skeletal - Bone

(c) Cardiac - Heart

(4) (a) Smooth - Toes

(b) Skeletal - Legs

(c) Cardiac - Heart

---

165. Match List-I with List-II

	List I		**List II**
A.	Typhoid	I.	Fungus
B.	Leishmaniasis	II.	Nematode
C.	Ringworm	III.	Protozoa
D.	Filariasis	IV.	Bacteria

Choose the correct answer from the options given below:

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

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

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

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

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166. Match List-I with List-II

List-I	Cell Structure	List-II	Associated Organelle/Function
A	Axoneme	I	Centriole
B	Cartwheel pattern	II	Cilia and flagella
C	Crista	III	Chromosome
D	Satellite	IV	Mitochondria

Choose the correct answer from the options given below:

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

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

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

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

---

167. In both sexes of cockroach, a pair of jointed filamentous structures called anal cerci are present on:

(1) 10^{th} segment

(2) 8^{th} and 9^{th} segment

(3) 11^{th} segment

(4) 5^{th} segment

---

168. Match List-I with List-II

List-I	Organism/Structure	List-II	Phylum/Class
A	*Pleurobrachia*	I	Mollusca
B	Radula	II	Ctenophora
C	Stomochord	III	Osteichthyes
D	Air bladder	IV	Hemichordata

Choose the correct answer from the options given below:

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

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

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

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

---

169. Following are the stages of pathway for conduction of an action potential through the heart:

A. AV bundle

B. Purkinje fibres

C. AV node

D. Bundle branches

E. SA node

Choose the correct sequence of pathway from the options given below:

(1) A-E-C-B-D

(2) B-D-E-C-A

(3) E-A-D-B-C

(4) E-C-A-D-B

---

170. The flippers of Penguins and Dolphins are the example of:

(1) Natural selection

(2) Convergent evolution

(3) Divergent evolution

(4) Adaptive radiation

---

171. Which one is the correct product of DNA-dependent RNA polymerase to the given template?

3' TACATGGCAAATATCCATTCA 5'

(1) $5'$AUGUAAAGUUUAUAGGUAAGU$3'$

(2) $5'$AUGUACCGUUUAUAGGGAAGU$3'$

(3) $5'$ATGTACCGTTTATAGGTAAGT$3'$

(4) $5'$AUGUACCGUUUAUAGGUAAGU$3'$

---

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

Assertion A: Breastfeeding during the initial period of infant growth is recommended by

doctors for bringing a healthy baby.

Reason R: Colostrum contains several antibodies absolutely essential to develop resistance for the newborn baby.

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

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

(2) A is correct but R is not correct

(3) A is not correct but R is correct

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

---

173. Which of the following factors are favourable for the formation of oxyhaemoglobin in alveoli?

(1) High pO_2 and Lesser H^+ concentration

(2) Low pCO_2 and High H^+ concentration

(3) Low pCO_2 and High temperature

(4) High pO_2 and High pCO_2

---

174. Consider the following statements:

A. Annelids are true coelomates

B. Poriferans are pseudocoelomates

C. Aschelminthes are acoelomates

D. Platyhelminthes are pseudocoelomates

Choose the correct answer from the options given below:

(1) A only

(2) C only

(3) D only

(4) B only

---

175. Following are the stages of cell division:

A. Gap 2 phase

B. Cytokinesis

C. Synthesis phase

D. Karyokinesis

E. Gap 1 phase

Choose the correct sequence of stages from the options given below:

(1) E-B-D-A-C

(2) B-D-E-A-C

(3) E-C-A-D-B

(4) C-E-D-A-B

---

176. Which of the following statements is incorrect?

(1) Most commonly used bio-reactors are of stirring type

(2) Bio-reactors are used to produce small scale bacterial cultures

(3) Bio-reactors have an agitator system, an oxygen delivery system, and a foam control system

(4) A bio-reactor provides optimal growth conditions for achieving the desired product

---

177. Match List I with List II:

	List I		List II
A.	Pons	I.	Provides additional space for Neurons, regulates posture and balance.
B.	Hypothalamus	II.	Controls respiration and gastric secretions.
C.	Medulla	III.	Connects different regions of the brain.
D.	Cerebellum	IV.	Neuro secretory cells

Choose the correct answer from the options given below:

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

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

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

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

---

178. Which of the following is not a natural/traditional contraceptive method?

(1) Periodic abstinence

(2) Lactational amenorrhea

(3) Vaults

(4) Coitus interruptus

---

179. Which one of the following factors will not affect the Hardy-Weinberg equilibrium?

(1) Genetic drift

(2) Gene migration

(3) Constant gene pool

(4) Genetic recombination

---

180. Match List I with List II:

List I		**List II**	
A.	*Pterophyllum*	I.	Hag fish
B.	*Myxine*	II.	Saw fish
C.	*Pristis*	III.	Angel fish
D.	*Exocoetus*	IV.	Flying fish

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

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

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

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

---

181. Which of the following is not a component of the Fallopian tube?

(1) Isthmus

(2) Infundibulum

(3) Ampulla

(4) Uterine fundus

---

182. Match List I with List II:

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

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

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

List I		List II	
A.	Cocaine	I.	Effective sedative in surgery
B.	Heroin	II.	*Cannabis sativa*
C.	Morphine	III.	*Erythroxylum*
D.	Marijuana	IV.	*Papaver somniferum*

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

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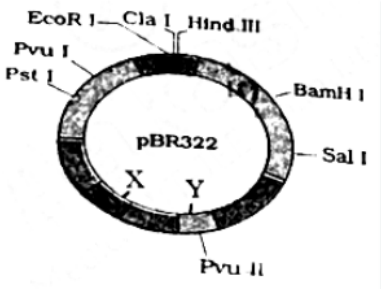
183. The following diagram shows restriction sites in *E. coli* cloning vector pBR322. Find the role of 'X' and 'Y' genes:



(1) The gene 'X' is responsible for controlling the copy number of the linked DNA and 'Y' for protein involved in the replication of Plasmid.

(2) The gene 'X' is for protein involved in replication of Plasmid and 'Y' for resistance to antibiotics.

(3) Gene 'X' is responsible for recognition sites and 'Y' is responsible for antibiotic resistance.

(4) The gene 'X' is responsible for resistance to antibiotics and 'Y' for protein involved in the replication of Plasmid.

---

184. Which of the following are Autoimmune disorders?

A. Myasthenia gravis

B. Rheumatoid arthritis

C. Gout

D. Muscular dystrophy

E. Systemic Lupus Erythematosus (SLE)

(1) A, B & E only

(2) B, C & E only

(3) C, D & E only

(4) A, B & D only

---

185. Match List I with List II:

	List I		List II
A.	Expiratory capacity	I.	Expiratory reserve volume + Tidal volume + Inspiratory reserve volume
B.	Functional residual capacity	II.	Tidal volume + Expiratory reserve volume
C.	Vital capacity	III.	Tidal volume + Inspiratory reserve volume
D.	Inspiratory capacity	IV.	Expiratory reserve volume + Residual volume

Choose the correct answer from the options given below :

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

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

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

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

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186. Match List I with List II:

List I	Description	List II	Explanation
A.	P wave	I.	Heart muscles are electrically silent.
B.	QRS complex	II.	Depolarisation of ventricles..
C.	T wave	III.	Depolarisation of atria.
D.	T-P gap	IV.	Repolarisation of ventricles.

Choose the correct answer from the options given below :

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

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

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

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

---

187. Given below are two statements:

Statement I: The cerebral hemispheres are connected by nerve tract known as corpus callosum.

Statement II: The brain stem consists of the medulla oblongata, pons and cerebrum.

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.

---

188. Given below are two statements:

Statement I: Mitochondria and chloroplasts both are double membrane-bound organelles.

Statement II: Inner membrane of mitochondria is relatively less permeable, as compared to chloroplast.

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

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

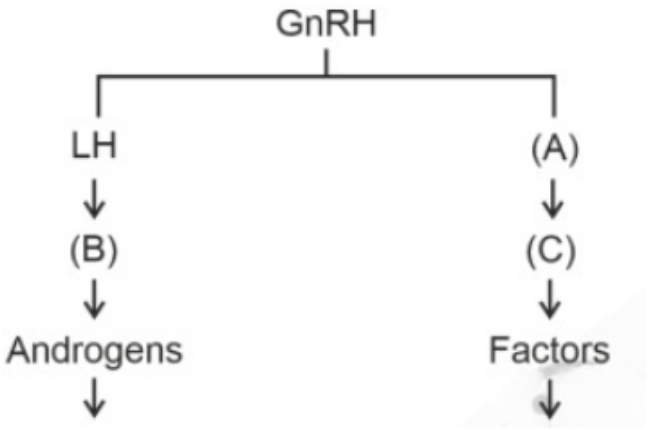
(2) **Statement I is correct but Statement II is incorrect.**

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

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

---

189. Identify the correct option (A), (B), (C), (D) with respect to spermatogenesis.



Choose the correct answer from the options given below:

(1) ICSH, Interstitial cells, Leydig cells, spermiogenesis.

(2) FSH, Sertoli cells, Leydig cells, spermatogenesis.

(3) ICSH, Leydig cells, Sertoli cells, spermatogenesis.

(4) **FSH, Leydig cells, Sertoli cells, spermiogenesis.**

---

190. Given below are two statements:

Statement I: Bone marrow is the main lymphoid organ where all blood cells including lymphocytes are produced.

Statement II: Both bone marrow and thymus provide micro environments for the development and maturation of T-lymphocytes.

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.**

---

191. As per ABO blood grouping system, the blood group of father is B^+, mother is A^+, and the child is O^+. Their respective genotype can be:

(A) I^Bi/I^Ai

(B) I^BI^B/I^Ai

(C) I^AB/I^AI^B

(D) I^Ai/I^BI^A

(E) ii/I^AI^B

Choose the most appropriate answer from the options given below :

(1) B only

(2) C & B only

(3) D & E only

(4) A only

---

192. Given below are two statements:

Statement I: Gause's competitive exclusion principle states that two closely related species competing for different resources cannot exist indefinitely.

Statement II: According to Gause's principle, during competition, the inferior will be eliminated. This may be true if resources are limiting.

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.

---

193. Match List I with List II:

List I		**List II**
A. Mesozoic Era		I. Lower invertebrates
B. Proterozoic Era		II. Fish & Amphibia
C. Cenozoic Era		III. Birds & Reptiles
D. Paleozoic Era		IV. Mammals

Choose the correct answer from the options given below:

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

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

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

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

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194. Match List I with List II:

List I		List II
A. RNA polymerase III		I. snRNPs
B. Termination of transcription		II. Promoter
C. Splicing of Exons		III. Rho factor
D. TATA box		IV. SnRNAs, tRNA

Choose the correct answer from the options given below:

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

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

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

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

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195. Regarding the catalytic cycle of an enzyme action, select the correct sequential steps:

A. Substrate enzyme complex formation.

B. Free enzyme ready to bind with another substrate.

C. Release of products.

D. Chemical bonds of the substrate broken.

E. Substrate binding to active site.

Choose the correct answer from the options given below:

(1) A, E, B, D, C

(2) B, A, C, D, E

(3) E, D, C, B, A

(4) E, A, D, C, B

---

196. Match List I with List II:

List I		List II
A. Unicellular glandular epithelium		I. Salivary glands
B. Compound epithelium		II. Pancreas
C. Multicellular glandular epithelium		III. Goblet cells of alimentary canal
D. Endocrine glandular epithelium		IV. Moist surface of buccal cavity

Choose the correct answer from the options given below:

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

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

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

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

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197. Match List I with List II:

	List I		**List II**
A.	Exophthalmic goiter	I.	Excess secretion of cortisol, moon face & hypergylcemia.
B.	Acromegaly	II.	Hypo-secretion of thyroid hormone and stunted growth.
C.	Cushing's syndrome	III.	Hyper secretion of thyroid hormone & protruding eye balls.
D.	Cretinism	IV.	Excessive secretion of growth hormone.

Choose the correct answer from the options given below:

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

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

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

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

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198. Choose the correct statement given below regarding juxta medullary nephron:

(1) Renal corpuscle of juxta medullary nephron lies in the outer portion of the renal medulla.

(2) Loop of Henle of juxta medullary nephron runs deep into medulla.

(3) Juxta medullary nephrons outnumber the cortical nephrons.

(4) Juxta medullary nephrons are located in the columns of Bertini.

---

199. Match List I with List II related to the digestive system of a cockroach:

	List I		List II
A.	The structures used for storing of food	I.	Gizzard
B.	Ring of 6-8 blind tubules at junction of foregut and midgut.	II.	Gastric Caeca
C.	Ring of 100-150 yellow coloured thin filaments at junction of midgut and hindgut.	III.	Malpighian tubules
D.	The structures used for grinding the food.	IV.	Crop

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-II, C-IV, D-I

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

---

200. The following are the statements about non-chordates:

A. Pharynx is perforated by gill slits.

B. Notochord is absent.

C. Central nervous system is dorsal.

D. Heart is dorsal if present.

E. Post-anal tail is absent.

Choose the most appropriate answer from the options given below:

(1) A, B & D only

(2) B, D & E only

(3) B, C & D only

(4) A & C only
