

## **Model Questions of Zoology Hons.**

### **CC-IV (Animal physiology)**

UCH

1. What is epithelial tissue ? State its characters.
2. Mention the different types of Epithelial tissues with examples.
3. What is stratified epithelium ?
4. What are apocrine, merocrine and holocrine glands ? Give examples.
5. What are the characters of Connective tissue ?
6. What are the differences between epithelial and connective tissue ?
7. State types of connective tissues with examples.
8. What is collagen and reticular fibers ?
9. What is extracellular matrix ? State its components.
10. Mention different types of cartilages with figures.
11. State the characters and components of bone.
12. Why blood is regarded as connective tissue ?
13. What is the origin of epithelial tissues ?
14. What is the origin of connective tissues ?
15. Describe the components of blood.
16. What is the source of blood formation ?
17. What is platelet ? State their origin and function ?
18. What are the functions of different WBCs ?
19. What is intercalated discs ?
20. What is cross striations ?
21. State the characters of different muscles ?
22. Which muscle cell additionally have endocrine function ?
23. State the ultrastructure of skeletal muscle.
24. What is actin, myosin ?
25. Describe the role of Calcium in muscle contraction.
26. What is motor unit ?
27. State the structural organization of human GI tract.
28. How digestion occurs within GI tract ?
29. State different parts of Stomach.
30. State the structural organization of small and large intestine.
31. How nutrients are absorbed through small intestine ?
32. Tabulate different GI enzymes according to origin and functions.
33. How hormones regulate GI enzyme secretion ?
34. State the histological structure of mammalian Lung.
35. State the mechanism of respiration ? How is it regulated ?
36. Describe different respiratory volumes.
37. What is hemoglobin ? State structure and function with diagram.
38. What is hemocyanine ?
39. How much molecular oxygen a single hemoglobin can carry ?
40. What are the different types of hemoglobin ?
41. How oxygen is transported in blood ?
42. How CO<sub>2</sub> is transported in blood ?
43. State O<sub>2</sub>/CO<sub>2</sub> dissociation curves and the factors affecting it.
44. What is the reason of having different Blood groups (ABO) ?
45. What is Rh factor and Bombay phenotype ?
46. State structure of human heart.
47. What is SA, AV node ? Function ?
48. What is chordae tendineae ? State function.
49. How cardiac impulses travels far from source ?
50. State origin and conduction of cardiac impulse.
51. What is cardiac cycle ?
52. What is cardiac output ? How is it regulated ?

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53. What is Frank-Sterling law ?
  54. Describe structure of Kidney and Nephron ?
  55. How urine is formed ? How is it regulated ?
  56. Describe histological structures of Testis and Ovary ?
  57. What is cumulus oophorus ?
  58. What is Seminiferous tubule ?
  59. What is Sertoli cell ? State its function.
  60. How sperm cell is formed ?
  61. What is the function of Leydig cell ?
  62. What is spermatogonial cell and its function ?
  63. What is ovarian follicles ? State the types.
  64. What kind of cells can be found in mature follicles ?
  65. What is Graafian follicle ?
  66. What is corpus luteum ? State function.
  67. From where estrogen, progesterone are secreted ?
  68. What is menstrual cycle ? How is it hormonally regulated ?
  69. What is estrous cycle ?
  70. What is endocrine, exocrine, paracrine, and autocrine gland ?
  71. What is melatonin ? State its function.
  72. Why melatonin is regarded as Hormone of Dracula ?
  73. State ultrastructure of Pituitary, thyroid, pancreas and adrenal gland with diagrams. Tabulate the hormones secreted by them and mention their functions.
  74. What is feedback regulation of hormone secretion ?
  75. Classify hormones on the basis of their chemical nature and size.
  76. What is steroid hormone ? Mention their mode of action ?
  77. What is signal transduction ?
  78. How anterior pituitary hormone secretion are regulated ?
  79. What is the chemical nature of Thyroxine ?
  80. Why pancreas is called mixed gland ?
  81. What are the structural units of Thyroid, Pancreas, Testis and Ovary ?
  82. What is Islets of Langerhans ?
  83. What kind of cells are present in Islets of Langerhans ?
  84. What is androgen ?
  85. What are minerelocorticoid and glucocorticoid ? Where is it formed ?
  86. Name 2 neuroendocrine hormone ?
  87. What is Gigantism, exophthalmic goiter ?
  88. Name the placental hormones ? Mention their functions.
  89. Describe the structure of neuron ?
  90. What is axon hillock ?
  91. What is membrane potential ?
  92. What is action potential ?
  93. What is threshold of excitation ?
  94. What is membrane depolarization ?
  95. How  $\text{Na}^+/\text{K}^+$ -ATPase generates action potential ?
  96. How nerve impulse conduction occurs through myelinated and non-myelinated neurons ?
  97. What is Schwann cell ? State function.
  98. What is Nodes of Ranvier ?
  99. What is salutatory conduction ?
  100. What is synapse ? Mention types.
  101. What is electrical synapse ?
  102. What is neurotransmitter ? Give examples.
  103. How acetylcholine conducts nerve impulse through synapse ?
  104. How action potential is generated in post-synaptic membrane ?
  105. Mention structure of Neuromuscular junction.