

2024
M.Sc.
Second Semester
CORE – 06
ZOOLOGY
Course Code: MZOC 2.21
(Animal Physiology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Explain the role of gastrointestinal hormones in the secretion of digestive enzymes. Briefly describe enteric nervous system with a diagram. 10+4=14
2. Explain the mechanism of digestion of protein. 14

UNIT-II

3. Explain the physiology of membrane potential. Why is membrane potential essential to the survival of all living creatures? 10+4=14
4. Describe the following with diagrams: 7×2=14
 - (a) Structure of cation permeable channels
 - (b) Synaptic transmission

UNIT-III

5. Elucidate the types and function of respiratory pigments in organism. 14
6. Write notes on the following: 7×2 = 14
 - (a) Acidosis and alkalosis
 - (b) Dyspnea

UNIT-IV

7. Describe the mechanism of urine formation in nephron with a diagram.
Write briefly on renal control mechanism. $7+3+4=14$
8. Explain the factors regulating the temperature in animals. How does the body maintain homeostasis? $9+5=14$

UNIT-V

9. What are the constituents of blood? Explain with diagrams the structure of blood cells and functions. State the process of blood coagulation in in stepwise manner. $2+8+4=14$
10. Elucidate the mechanism of skeletal muscle contraction. Explain the energetics of muscle contraction. $8+6=14$
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