

2022
M.Sc.
First Semester
CORE – 02
ZOOLOGY
Course Code: MZOC 1.21
(Animal Physiology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Enumerate the different digestive enzymes secreted by the digestive glands. What are the roles of gastrointestinal hormones? 10+4=14
2. Explain the mechanism of digestion and absorption of fat. 7+7=14

UNIT-II

3. Describe with diagram the structure of brain. Illustrate the pathway of ions as carrier of calcium and potassium. 7+7=14
4. State the different types of synaptic transmission and state the differences. Write a note on the role of neuropeptide. 7+7=14

UNIT-III

5. Explain the role of blood in the conduction of respiration. What happens when there is an acid-base disturbance initiated by a reduction in CO₂ while respiring? 8+6=14
6. What is oxygen dissociation curve? Describe it with a sigmoid plot. 3+11=14

UNIT-IV

7. Describe the structure of a nephron with a diagram. Write any eight functions of kidney. 10+4=14

8. What are the different osmoregulatory challenges and solutions in aquatic and terrestrial environments? 14

UNIT-V

9. Explain the different phases of cardiac cycle with diagram. What are the major symptoms of diastolic dysfunction? 10+4=14
10. Sketch the ultra-structure of skeletal muscle and detail the chemical composition of the muscle. 7+7=14
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