

2024
M.Sc.
Second Semester
CORE – 05
ZOOLOGY
Course Code: MZOC 2.11
(Cell & Molecular Biology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. What are cytoskeletons? Describe the structure of actin filaments. 3+11=14
2. Explain the organization and function of plasma membrane. 10+4=14

UNIT-II

3. Write notes on the following: 7×2=14
 - (a) Nucleosomes
 - (b) Chromatin remodelling complex
4. Differentiate between intrinsic and extrinsic pathways of cell death. Elucidate on the mechanism of intrinsic pathway with schematic representation. 2+12=14

UNIT-III

5. Describe the structure and properties of DNA and RNA. 7+7=14
6. Explain the mechanism of transcription in eukaryotes. 14

UNIT-IV

7. Describe lac operon with a diagram. 11+3=14

8. Write notes on the following: 7×2=14
(a) Genetic code
(b) Inhibitors of protein synthesis

UNIT-V

9. Explain two methods of introduction of RDT into host cell. 7+7= 14
10. Write notes on the following: 7×2=14
(a) Plasmids
(b) Transgenic animals
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