

2023
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. Explain receptor mediated endocytic pathway and the role of coated pits unit. 10+4=14
2. Elucidate on microtubule assembly and intermediate filament assembly. 7+7=14

UNIT-II

3. Explain the chemical composition of chromatin and histone modification. 7+7=14
4. What are the phases of cell cycle? Discuss the checkpoints of a cell cycle and its importance. 5+9=14

UNIT-III

5. Discuss the role of enzymes and factors involved in DNA replication. 14
6. Describe the processing of mRNA in eukaryotes. 14

UNIT-IV

7. Write notes on the following: 7×2=14
 - (a) Repression
 - (b) Attenuation

8. Explain the post translational modifications of proteins. 14

UNIT-V

9. Explain the role of restriction enzymes and cloning vectors in rDNA technology. 14

10. Write notes on the following: $7 \times 2 = 14$

(a) Transduction

(b) Transfection
