

B.Sc. DEGREE END SEMESTER (SAY) EXAMINATION - MAY 2026**SEMESTER 5 : ZOOLOGY****COURSE : 19U5CRZOO05 - CELL AND MOLECULAR BIOLOGY***(For Supplementary (SAY) 2023 Admission)*

Time : Three Hours

Max. Marks: 60

PART A**Answer All (1 mark each)**

1. Define cell signalling.
2. Define Cistron
3. What are viroids?
4. What are constitutive genes?
5. What is a satellite in a chromosome?
6. What is ribophorin?
7. What is interphase?
8. What is reverse transcription?

(1 x 8 = 8)**PART B****Answer any 6 (2 marks each)**

9. Differentiate between primary and secondary constriction of the chromosome.
10. Differentiate between regulon and modulon.
11. Write a short note on synaptonemal complex.
12. Mention the functions of microtubules.
13. Explain the characteristics of the genetic code, including its redundancy, universality, and specificity.
14. Distinguish between purines and pyrimidines?
15. Tight junction is a modification of the plasma membrane. Comment.
16. Comment on paracrine signalling.

(2 x 6 = 12)**PART C****Answer any 4 (4 marks each)**

17. Explain the structure of nucleolus.
18. Briefly describe the structure of DNA.
19. Elaborate on the fluid-mosaic model of plasma membrane.
20. Explain the types of vesicles packaged for transportation by the golgi complex.
21. Comment on initiation, elongation and termination events in prokaryotic DNA replication.
22. Elaborate on **trp** operon.

(4 x 4 = 16)**PART D****Answer any 2 (12 marks each)**

23. Give a detailed account on Meiosis with suitable diagrams.
24. Enumerate and explain the functions of the plasma membrane.

25. Elaborate on the functions of the lysosome.
26. Explain the nucleosome model of chromosome. Comment on its significance.

(12 x 2 = 24)