

B.Sc. DEGREE END SEMESTER EXAMINATION OCTOBER/NOVEMBER 2018**SEMESTER –5: ZOOLOGY (CORE COURSE)****COURSE: U5CRZOO5: CELL BIOLOGY AND MOLECULAR BIOLOGY***(For Supplementary - 2014 admission)*

Time: Three Hours

Max. Marks: 60

PART A*Answer **all** questions. Each question carries **1** mark.*

1. Give two examples for microfilaments.
2. What are split genes?
3. Define junk genes.
4. Distinguish between pinocytosis and phagocytosis
5. What is Recon?
6. Name two cell signaling molecules.
7. Define one gene one enzyme hypothesis?
8. What are transposons?

(1 x 8 = 8)**PART B***Answer **any Six** questions. Each question carries **2** marks.*

9. Define cell theory.
10. What is Osmosis?
11. What do you mean by cell recognition?
12. What are the post transcriptional modifications of m-RNA?
13. Discuss the contributions of Har Gobind Khorana.
14. Draw a diagram of nuclear pore complex and label its parts.
15. Distinguish between paracrine and autocrine signaling.
16. What are Prions?
17. What are desmosomes?
18. Briefly explain Catabolic repression.

(2 x 6 = 12)**PART C***Answer **any four** questions. Each question carries **4** marks.*

19. List the major functions of Golgi body.
20. Explain the Central Dogma of molecular biology

21. Plasma membrane is a quasi-fluid membrane. Why?
22. Define operon and write about lac operon.
23. Distinguish between prokaryotes and eukaryotes?
24. Explain the structure and functions of nucleosome. (4 x 4 = 16)

PART D

*Answer **any Two** questions. Each question carries **12** marks.*

25. Briefly explain the different modifications of plasma membrane with diagrams?
26. Distinguish between mitosis and meiosis and give illustrations.
27. Give a detailed account of the structure and functions of DNA
28. Explain the structure and function of mitochondria. (12 x 2 = 24)
