Reg. No……..…….. Name……

B.Sc. DEGREE END SEMESTER EXAMINATION: OCTOBER 2022

SEMESTER **5: ZOOLOGY (CORE COURSE)**

COURSE: **15U5CRZOO5: CELL BIOLOGY AND MOLECULAR BIOLOGY**

(Common for Supplementary 2015/2016/2017/2018 admissions)

Time: Three Hours Max. Marks: 60

Instructions:

1. Time allotted for the examination is 3 Hours

*2. Answer **all** questions in part A. Answer **any 6** questions from part B, **any 4** from part C and **any 2 from part D***

PART A

1. What is Karyotype?
2. Define Cistron.
3. Define anticodon
4. What is mitosis
5. What are pseudogenes?
6. Define a living cell.
7. Define Osmosis.
8. What are Mycoplasma? (1 x 8 = 8)

PART B

9. Distinguish between centrosome and centromere.
10. What are the basic requirements in DNA replication?
11. Brief on the three types of RNAs.
12. Genetic code is degenerate. Justify.
13. What is GERL concept?
14. What do you mean by cell recognition?
15. Draw the diagram of nuclear pore complex and label its parts.
16. Explain catabolite repression. (2 x 6 = 12)

PART C

17. Give an account on polymorphism of lysosomes.
18. Describe the structure of nuclear membrane.
19. Explain the structure and functions of mitochondria.
20. Give an account on split genes.
21. Describe the various methods of transposition.
22. Explain the contributions of Hargobind Khorana. (4 x 4 = 16)

PART D

23. Write an essay on giant chromosomes.
24. Explain the structure and chemical composition of chromosomes.
25. Explain the structure and functions of interphase nucleus
26. Give an account of the sequence of mitotic events with the help of suitable labeled diagrams

(12 x 2 = 24)