Reg. No ..... Name **22U509**

B. Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022

SEMESTER 5 : ZOOLOGY

COURSE : **19U5CRZOO05 : CELL AND MOLECULAR BIOLOGY**

(For Regular - 2020 Admission and Supplementary - 2019 Admission)

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. Define Cistrons?
2. Define Wobbly base
3. Differentiate Prokaryotes and Eukaryotes.
4. Acrosome is a specialised lysosome. Justify.
5. What is a chromatin material?
6. Name the stages in Interphase.
7. What is signal transduction?
8. What are constitutive genes?

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. Differentiate Junk genes from Pseudogenes?
10. Comment about sense and Antisense strands?
11. Differentiate Endocytosis and Exocytosis.
12. Elaborate on the functions of Smooth Endoplasmic Reticulum.
13. Illustrate the nucleosome.
14. Write a short note on the different phases of interphase.
15. Write a short note on synaptic signaling.
16. What are the components of a bacterial operon?

(2 x 6 = 12)

PART C

Answer any 4 (4 marks each)

17. Explain the features of Watson and Crick double helix model of DNA
18. Write the features of the genetic code.
19. Plasma membrane is a quasi fluid structure. Justify and illustrate.
20. Explain the types of vesicles packaged for transportation by the golgi.
21. Explain in detail the nuclear envelope and its functions.
22. Elaborate on trp operon.

(4 x 4 = 16)

PART D

Answer any 2 (12 marks each)

23. Explain the mechanism of translation
24. Ennumerate and explain the functions of the plasma membrane.
25. Explain the functions of Endoplasmic reticulum.
26. Lac operon shows both positive and negative control. Discuss with illustrations.

(12 x 2 = 24)