

B.Sc. DEGREE END SEMESTER EXAMINATION OCTOBER 2017**SEMESTER –5: ZOOLOGY (CORE COURSE)****COURSE: 15U5CRZOO05: CELL BIOLOGY AND MOLECULAR BIOLOGY***(For Regular 2015 admission)*

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 are messenger molecules? Give one example.
2. What is Karyotype?
3. Write on Cell coat.
4. Define Cistron.
5. What is Pinocytosis?
6. Write the stop codons.
7. What is TATA box?
8. Define Modulon.

 $(1 \times 8 = 8)$ **PART B**

9. What is unit membrane concept?
10. Mention the contributions of Har Gobind Khorana
11. Explain the role of tRNA in protein synthesis.
12. Describe Hershey- Chase experiment.
13. Distinguish between centrosome and centromere.
14. Explain GERL concept.
15. Write on prophase of Meiosis I.
16. What are the basic requirements in DNA replication?

 $(2 \times 6 = 12)$ **PART C**

17. Explain the various post-translational modifications in eukaryotes.
18. Describe the semi conservative replication of DNA.
19. Give an account on polymorphism of lysosomes.
20. Write down the modern concepts of gene.

21. Explain the nucleosome model.
22. Describe the structure of nuclear membrane. (4 x 4 = 16)

PART D

23. Write an essay on giant chromosomes.
24. Explain the operon concept with reference to lac operon.
25. Explain the mechanism of transport across plasma membrane.
26. Give an account on protein synthesis in eukaryotes. (12 x 2 = 24)
