Reg. No ..... Name **17P3622**

MSc DEGREE END SEMESTER EXAMINATION- OCTOBER-NOVEMBER 2017

SEMESTER 3 : ZOOLOGY

COURSE : **16P3ZOOT10 ; CELL AND MOLECULAR BIOLOGY**

(For Regular - 2016 admission)

Time : Three Hours Max. Marks: 75

Section A

Answer any 8 (2 marks each)

1. What are liposomes?
2. Define ECM
3. Comment on the molecular organization of cadherins
4. List out the functions of golgi complex.
5. Comment on 'protein factory' of the cell
6. What is meant by non muscle motility? Mention any two of it.
7. What are the possible end results of cell signal transduction?
8. Briefly explain convergence as a regulatory mechanism of cell signaling.
9. What are cyclins?
10. Comment on the activation of protooncogenes to oncogenes
11. Comment on RNA polymerases of eukaryotes.
12. What are DNA sequence elements?

8 x 2 (16)

Section B

Answer any 7 (5 marks each)

13. Write notes on adherens junctions
14. Discuss the molecular organization and functions of gap junctions
15. Explain how secretory products are transported in the cell.
16. What is the main function of intermediate filaments?
17. Mention few metabolic processes in which Calcium ions are important. How their availability in cells is regulated?
18. Comment on apoptosis and its significance.
19. Classify cancers based on primary site.
20. Discuss the role of inhibition of angiogenesis in cancer prevention and treatment.

21. What are post transcriptional modifications?
22. Elaborate the working of lac- operon.

7 x 5 (35)

Section C
Answer any 2 (12 marks each)

23. Describe fluid mosaic model of cell membrane. Co- relate it with important cell - membrane functions.
24. Explain the molecular mechanism associated with of various senses in human body.
25. Explain the process of transcription in eukaryotes and prokayotes. Highlight the major differences.
26. Briefly explain various types of gene regulatory mechanism in eukaryotes.

2 x 12 (24)