

Reg. No

Name

M. Sc DEGREE END SEMESTER EXAMINATION - OCTOBER 2019**SEMESTER 3 : ZOOLOGY****COURSE : 16P3ZOOT10 : CELL AND MOLECULAR BIOLOGY***(For Regular - 2018 Admission and Supplementary - 2016/2017 Admissions)*

Time : Three Hours

Max. Marks: 75

Section A**Answer any 8 (2 marks each)**

1. What are Integral proteins?
2. Comment on the molecular organization of Cadherins.
3. Why mitochondria is called the 'Power house of the cell'.
4. What is special about the inner membrane of mitochondria?
5. What are intermediate filaments? Name any two proteins present in them.
6. Briefly describe cytokine receptors.
7. Explain with an example how bacterial toxin hinders cell signaling.
8. Mention check points in a cell cycle?
9. Differentiate between leukemia and lymphoma
10. Define 'oncogene addiction'.
11. What do you mean by 'rho' dependent termination?
12. What is attenuation?

(2 x 8 = 16)

Section B**Answer any 7 (5 marks each)**

13. Briefly explain the various cell membrane lipids.
14. Discuss the molecular organization and functions of tight junctions
15. Outline the two pathways for maturation of vesicles in Golgi complex.
16. How are microtubules organized in a cell?
17. Elaborate the structural details of GPCR.
18. Comment on 'Apoptosis' and mention its significance.
19. Give an overview of tumor suppressor genes.
20. Give an account of Oncogenes.
21. Explain the process of translation elongation in eukaryotes
22. Comment on the role of silencers as gene regulators.

(5 x 7 = 35)

Section C
Answer any 2 (12 marks each)

23. Explain how the chemistry of cell membrane is related to its functions.
24. Write an essay on RTK pathway in cell signalling and comment on its importance.
25. What is translation? Explain the steps involved in prokaryotic translation. Point out the major differences that you find in eukaryotic translation.
26. Describe on the different methods of prokaryotic gene regulation.

(12 x 2 = 24)