Reg. No ....   Name **18P147**

MSc DEGREE END SEMESTER EXAMINATION - NOVEMBER 2018
SEMESTER 1 : BOTANY
COURSE : **16P1BOTT04 : CELL BIOLOGY**
(For Regular - 2018 & Supplementary - 2017 & 2016 Admission)

Time : Three Hours   Max. Marks: 75

Section A
Answer any 8 (2 marks each)

1. What are the major functions of active transport?
2. Differentiate fatty acyl anchors from prenyl anchors.
3. Histone proteins are rich in arginine and lysine aminoacids. Why?
4. What is chromatosome?
5. Meiosis I is known as reduction division. Why?
6. What is synaptonemal complex?
7. What is chiasmata?
8. What is H-strand and L-strand?
9. What is cancer? What are the major features of cancer cells?
10. What are oncogenes? Give examples.
11. Give an account on chaperons. Give an example.
12. Give an account of cAMP.

(2 x 8 = 16)

Section B
Answer any 7 (5 marks each)

13. Explain the structure and functions of ATPase pumps.
14. What do you mean by the transition temperature of a lipid bilayer? What is the significance of the Tm value?
15. Explain the structure and function of Muk BEF complex.
16. Explain the structure of mitochondrial genome.
17. Explain the process of conversion of proto-oncogenes to viral oncogenes.
18. Give an account on major protein sorting pathways in eukaryotes.
19. Briefly explain the process of uptake of proteins into mitochondria.
20. Give an account on various classes of motor proteins? Explain with reason why intermediate filaments lack motor proteins.
21. Explain the various types of receptors in cell signalling.
22. What are some of the functions of apoptosis?

(5 x 7 = 35)

Section C
Answer any 2 (12 marks each)

23. What is membrane fluidity? What are the factors affecting fluidity? How do organisms maintain the fluidity of membranes?

OR

25. Explain the transport of proteins from cytoplasm to the nucleus.

26. Compare and contrast mitosis and meiosis.

OR

27. Explain the structure of chloroplast and mitochondrial genome.

(12 x 2 = 24)