

2024

3rd Semester Examination (CCFUP : NEP)

BOTANY

Paper : MJ A3-T (Multidisciplinary Major)

(Cell Biology)

Full Marks : 40

Time . Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *five* questions . $2 \times 5 = 10$

1. What are the differences between prokaryotic and eukaryotic cells?
2. What is the difference between mitosis and meiosis cell division?
3. What is the difference between cell membrane and cell wall?
4. What is selective permeability?
5. What are check points in cell cycle?
6. Explain the reason of name Endoplasmic reticulum.

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7. Why membrane fluidity is important?
8. Write the function of membrane carbohydrates.

Group - B

Answer any **four** questions : $5 \times 4 = 20$

9. What is the cell theory and who discovered it? What do you mean by selective permeability of cell membrane? $(2+1)+2$
10. What are the types of membrane proteins and their functions?
11. What is synaptonemal complex? What are the significances of meiosis? $2+3$
12. Define different phases (G1, G2, G0, M and S) of cycle.
13. Briefly discuss on properties and functions of cell wall.
14. Write the importance of meiosis. What is endosymbiotic hypothesis? $2+3$

Group - C

Answer any **one** question : $10 \times 1 = 10$

15. Describe the structure and function of the cell membrane (plasma membrane). What is glycoprotein? $8+2$
16. What are the main functions of the following organelles . mitochondria, endoplasmic reticulum, chloroplast and ribosomes?