

Exam. Code : 103202
Subject Code : 1287

B.A./B.Sc. Semester—II

BOTANY

Paper—II A (Cell Biology)

Time Allowed—3 Hours] [Maximum Marks—35

Note : Attempt any **FIVE** questions from the following.
Question No. 1 is compulsory. All questions carry equal marks.

1. Write briefly about the following :
 - (i) Nucleoplasm
 - (ii) Plasmids
 - (iii) Functions of nucleolus
 - (iv) Chromatin
 - (v) Aneuploidy
 - (vi) Bilayer lipid structure
 - (vii) Centromere.
2. Discuss about the nuclear membrane and its functions with well labelled diagrams.
3. What is the difference between mitochondrial and chloroplast DNA ? Describe mitochondrial DNA.

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4. How do chromosomal alterations occur in nature ? Describe the different type of inversions.
5. Discuss peroxisomes and its metabolic functions.
6. Describe the morphology of a chromosome.
7. Write short notes on :
 - (i) Robertsonian translocation
 - (ii) Duplications
8. What is polyploidy ? Discuss its significance in crop plants.
9. Describe the structure and function of the plasma membrane.