

Exam. Code : 103202
Subject Code : 1249

B.A./B.Sc. 2nd Semester

BOTANY

Paper—II A (Cell Biology)

Time Allowed—3 Hours]

[Maximum Marks—35

Note :— The question paper consists of **FOUR** sections with **TWO** questions in each section. Candidates are required to attempt **FIVE** questions, selecting at least **ONE** question from each section. The **FIFTH** question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. With the help of suitable diagrams, Give an account of nuclear envelope. 7
2. Write notes on the following (3.5 marks each) : 7
 - (a) Nucleoplasm and nuclear matrix.
 - (b) Difference between euchromatin and heterochromatin.

SECTION—B

3. Write short notes on (3.5 marks each) :
 - (a) Functions of mitochondrial and plastid DNA.
 - (b) Peroxisomes.

4. What do you understand by Endoplasmic reticulum ?
With the help of suitable diagrams, discuss the structure and functions of Endoplasmic reticulum. 7

SECTION—C

5. Write notes on the following (3.5 marks each) :—
(a) Autopolyploids.
(b) Sex chromosomes.
6. What do you understand by Chromosomal Translocations ?
With the help of suitable diagrams, show meiotic behaviour of translocation heterozygotes. Discuss in brief. 7

SECTION—D

7. Give an account of structure and functions of plasma membrane. Support your answer with well labelled diagrams.
8. Write notes on the following (3.5 marks each) :— 7
(a) Microfibrils of the cell wall
(b) Functions of the cell wall.