

Roll No.

(12/19-II)

5165

B. Sc. EXAMINATION

(First Semester)

BOTANY

Second Paper

Cell Biology

Time : Three Hours

Maximum Marks : 40

Note : Q. No. 1 is compulsory; each part of it is of 1 mark. Attempt any *Four* questions selecting 2 questions from each Unit. Support your answers with well labelled diagrams wherever necessary.

1. Answer the following in *one* word or *one* sentence only :

(a) Name the protein factories of a cell.

(b) Draw diagram of a cell in Anaphase-I.

- (c) What is submetacentric Chromosome ?
- (d) Define Trisomy.
- (e) What are allopolyploids ?
- (f) What do you mean by Middle lamella ?
- (g) Expand NOR.
- (h) Define homozygous deficiency.

Unit I

- 2. Explain the fluid mosaic model. Give various functions of a plasma membrane. 5+3
- 3. Write short notes on the following :
 - (a) Chloroplast 4
 - (b) Lysosomes. 4
- 4. Discuss ultra structure of Power house of a cell. Give its function and state why it is called semiautonomous organelle ? 8
- 5. Write explanatory note on the structure of ER. Discuss its types and functions. 4+4

Unit II

6. Write short notes on the following :
- (a) Chiasmata 3
 - (b) Non-disjunction 3
 - (c) Cytokinesis. 2
7. Discuss the ultra structure and functions of a typical eukaryotic chromosome. 8
8. What is translocation ? Explain its types, cytological effects and significance. 8
9. What do you mean by aneuploidy ? Explain its type and significance. 8