

# MJ-511

M.Sc. Botany
1st Semester Examination, July-Dec., 2021

Paper - I

# Cytology

Time: Three Hours] [Maximum Marks: 80

[Minimum Pass Marks: 16

Note: Answer all questions. All questions carry equal marks.

## Unit-I

1. Describe the structure, molecular organisation biogenesis and functions of cell-wall.

# OR

Write short notes on any two of the following:

- (a) Transport across cell membrane
- (b) The dynamic cell structure organisation
- (c) Models of plasma-membrane

#### Unit-II

2. Describe the structure and function and genome organisation of mitochondria.

#### OR

Write notes on any two of the following:

- (a) Chloroplast
- (b) Plant vacuole
- (c) RNA editing

#### Unit-III

3. Describe the ultrastructure and nucleosome model / organisation of nucleus.

#### OR

Write notes on any two of the following:

- (a) Ribosome
- (b) Cell-cycle
- (c) Mechanism of programmed cell-death

### Unit-IV

4. Describe the structure and function of Endoplasmic reticulum.

OR

Write notes on any two of the following:

- (a) Lysosome
- (b) FISH
- (c) Structure and function of microtubules