

M.Sc.- I (Botany) (CBCS Pattern) Semester-II
PSCBOTT07 - Cell and Molecular Biology-I

P. Pages : 1

Time : Three Hours



GUG/W/24/11197

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagrams wherever necessary

1. Describe the structure of Plasmodesmata and its role in movement of different macro molecules. **16**

OR

- a) Structure and function of ion carriers & channels **8**
b) Cell wall-structure. **8**

2. Describe organization and role of Microtubules and Microfilaments in detail. **16**

OR

- a) Chloroplast Ultra-structure and functions. **8**
b) Endoplasmic Reticulum Ultra-structure and functions. **8**

3. Describe the Ultra structure of Nucleus with special emphasis on nuclear pores and nucleolus. **16**

OR

- a) Prokaryotic DNA replication. **8**
b) DNA damage and repair. **8**

4. Give detail mechanism on Gene induction involved in phenylpropanoid metabolism and describe PR proteins and R-genes. **16**

OR

- a) Plant metabolism in response to biotic stress. **8**
b) Plant defense mechanism – passive and active. **8**

5. Write short notes on:
a) Fluid mosaic model. **4**
b) Motor movements. **4**
c) B and Z forms of DNA. **4**
d) ROS production. **4**
