

M.Sc.(Biotechnology) CBCS Pattern Semester-III
PSBIT110 - Paper-II - Plant Biotechnology

P. Pages : 1

Time : Three Hours



GUG/W/23/11237

Max. Marks : 80

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

1. What is conventional plant breeding? Describe in brief? 16

OR

- i) Discuss in detail tissue culture technique? 8
ii) Explain the role of auxin growth hormone in plant tissue culture? 8

2. What is organogenesis and embryogenesis? Discuss in brief transfer and establishment of whole plants in soil? 16

OR

- i) Give the account of shoot tip culture? 8
ii) Discuss in detail hybrid plants by protoplast isolation? 8

3. Describe in details mechanism of DNA transfer by using Ti and Ri as vectors? 16

OR

- i) Discuss methods of biological nuclear transformation? 8
ii) Discuss in detail chloroplast transformation? 8

4. Describe in detail insect resistance- Bt genes? 16

OR

- i) Explain coat protein mediated nucleocapsid gene? 8
ii) Describe transgenic plants as a food with golden rice? 8

5. Write in short – all compulsory? 4

- i) Explain single cell clones? 4
ii) Discuss in detail embryo culture? 4
iii) Explain in detail hairy root? 4
iv) Describe male sterile lines? 4
