

PSCBOTT15.2 - Paper-XV : Molecular Biology and Plant Biotechnology-II

P. Pages : 1

Time : Three Hours



GUG/S/23/11359

Max. Marks : 80

- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate your answer wherever necessary with the help of neat sketches.

1. What are cloning vectors? Write about different cloning vectors for higher plants. **16**

OR

Write notes on:

- a) *Agrobacterium tumefaciens* mediated gene transfer. **8**
b) Transgene stability and gene silencing. **8**

2. Write about bio-pesticides and biofertilizers. **16**

OR

Write notes on:

- a) Bio-degradable plastics. **8**
b) Edible vaccines. **8**

3. What is plant tissue culture? Write about different culture types for production of secondary metabolites. **16**

OR

Write notes on:

- a) Gene expression in Mitochondria. **8**
b) Regulation of gene expression in translation. **8**

4. What is cleaner Biotechnology? Write about pollution control through genetically modified organisms. **16**

OR

Write notes on:

- a) RAPD markers **8**
b) SSCP **8**

5. Write short notes on:

- a) Features of Ti plasmid. **4**
b) Bt genes **4**
c) Anther culture. **4**
d) SCAR **4**
