

**CORE ELECTIVE ; PLANT TISSUE CULTURE AND TRANSGENIC  
TECHNOLOGY**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 Plant tissue culture.
- 2 Explant.
- 3 Define cybrid.
- 4 What is Protoplast?
- 5 Secondary metabolites.
- 6 Ti.
- 7 Grown gall tumour.
- 8 Abiotic stress.
- 9 GM Crop.
- 10 RFLP.

**SECTION - B (25 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Write a short note on equipments required for plant tissue culture laboratory.  
OR  
b Write down the steps involved in preparation of explant.
- 12 a How is subculture of explants carried out?  
OR  
b Briefly discuss about organogenesis.
- 13 a Enumerate the significance of auxin and cytokinin in plant tissue culture.  
OR  
b What is meristem culture? What are its applications.
- 14 a Write a note on role of Ti plasmid vector for plant transformation.  
OR  
b Describe in detail about electroporation.
- 15 a Write a note on molecular events associated with insect resistance.  
OR  
b Write a note on genetic engineering of plants for herbicide resistance.

**SECTION - C (30 Marks)**

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Enumerate the different steps involved in plant tissue culture technique,
- 17 Describe in detail about Embryo culture.
- 18 Narrate the principle and method of micro propagation.
- 19 Give an account on Agrobacterium mediated transformation.
- 20 Write a note on genetic engineering in plants for pest resistance and