

**B Sc III Year V Semester-Question Bank****Subject: Plant Biotechnology****Group: Mb Bt C****Unit-1: Basics of Plant Biotechnology****Essay questions**

1. Write about the preparation of media employed for plant propagation.
2. Describe the nutritional requirements for plant tissue culture.
3. Discuss the effect of plant growth regulators on growth and development.
4. Write an essay on organogenesis.
5. Write an essay on embryogenesis.

**Short questions:**

1. Totipotency of plant cells
2. Callus culture
3. Auxins and Cytokinins
4. Cell suspension cultures
5. Organogenesis
6. Incubation

**Unit-2: Applications of Plant Tissue Culture****Essay questions**

1. Describe Meristem/shoot tip culture. Explain about production of disease free plants.
2. Write in detail about Micropropagation of elite ornamental plants via. Organogenesis
3. Explain about cell suspension cultures for the production of Secondary metabolites.
4. Write an essay on Somaclonal variations.
5. Explain different methods of cryopreservation for conservation of plant germplasm
6. What are Synthetic seeds? Discuss in detail about the production and encapsulation of Synthetic seeds.

**Short questions:**

1. Horticultural plants
2. Embryo culture and Embryo rescue
3. Cybrids
4. Anther and pollen culture
5. Protoplast culture and fusion
6. Production of Haploids

### **Unit-3: Transgenic plants and applications**

#### **Essay questions**

1. What are Herbicides? Write about the production of Glyphosate tolerant plants.
2. Explain in detail about insect resistant plants.
3. Define Transgene. Explain about transgenic plants with enhanced nutritive value.
4. Write in detail about Antibody production in plants. (or) Write about Plantibodies.
5. Explain about stress tolerant plants.
6. Give a detail account on Molecular farming. (or) How transgenic plants can be used as Bioreactors.

#### **Short questions:**

1. Bt corn
2. Transgenic plants with viral coat proteins and viral nucleoproteins
3. Transgenic plants with Vitamin- A and Vitamin E
4. Light stress
5. Biodegradable plastics
6. Plantibodies