

4. Explain the following :
- (a) Cryopreservation
  - (b) In-vitro mutagenesis
  - (c) Methods of transformation in plants
  - (d) Antisense RNA-technology. 16
5. (a) Explain role of different constituent in animal cell culture media. 8
- (b) Explain contact inhibition and anchorage dependence in animal cell culture. 8
6. Discuss in brief Bioreactor for animal cell culture. 16
7. Any **two** :
- (a) Mass production of vaccine
  - (b) Primary and Secondary cell lines
  - (c) Plant growth Hormones. 16
8. Write notes on :
- (a) Immobilization of cell
  - (b) Embryo culture technique
  - (c) Edible vaccine
  - (d) Applications of animal cell culture. 16

**NTK/KW/15/7961**

**Faculty of Engineering and Technology**

**Seventh Semester B.Tech. (Biotechnology)**

**(C.B.S.) Examination**

**TISSUE CULTURE TECHNOLOGY**

**Paper—BT BIT 702(T)**

Time : Three Hours]

[Maximum Marks—80

**INSTRUCTIONS TO CANDIDATES**

- (1) All questions carry marks as indicated.
  - (2) Answer any **FIVE** questions.
  - (3) Illustrate your answers wherever necessary with the help of neat sketches.
1. Explain important technique of plant tissue culture and its applications. 16
2. (a) What is micropropagation technique ? Explain. 8
- (b) Importance of somaclonal variation in tissue culture. 8
3. Explain protoplast isolation, fusion culture technique. Explain its application in Agriculture. 16