

[illegible]

Total No. of Questions : 8

Subject Code : MTBT-205-18

M.Code : 76050

Max. Marks : 60

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

1. What is animal cell bioreactor? Describe reactor systems for large scale production using animal cells.
2. What is cell immobilization? Describe micro and macro carrier cultures with suitable examples. Also highlight advantages and disadvantages in each case.
3. What are monoclonal and polyclonal antibodies? Describe the production and applications of monoclonal antibodies for diagnosis and therapy.
4. What is gene therapy? Describe cloning from short-term and long-term cultured cells with suitable examples.
5. What are signalling pathways? Describe the molecular and biochemical basis of plant-disease resistance.
6. What are edible vaccines? Describe the applications of genetic engineering in large scale production of pharmaceuticals with suitable examples.
7. What is molecular breeding? Describe the role of molecular markers in crop and farm animal improvement.
8. Describe briefly use of plants and animals for production of nutraceuticals with suitable examples.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.