

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII EXAMINATION – SUMMER 2016

Subject Code:180402

Date:05/05/2016

Subject Name:Animal and Plant Biotechnology

Time:10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give in short the history of animal tissue culture and enlist its applications. **07**
(b) With the help of neat and labeled diagram give the laboratory organization for tissue culture. **07**
- Q.2** (a) Explain the role of lethal gene, recombinase gene and repressor gene in terminator seed. **07**
(b) How plant tissue culture is important? Explain. **07**
- OR**
- (b) Differentiate between finite and infinite cell line. **07**
- Q.3** (a) Explain the transgenic strategies used to protect against plants against oxidative stress. **07**
(b) Explain coat protein mediated cross protection. **07**
- OR**
- Q.3** (a) Which genes from plants can be used for the protection of plants against insect? Explain their mechanism of action. **07**
(b) Explain different transgenic strategies for pathogen targeted resistance against virus. **07**
- Q.4** (a) What is somaclonal variation? **04**
(b) Explain the steps of micropropagation. **10**
- OR**
- Q.4** (a) Write short notes on protoplast isolation and fusion. **07**
(b) Give different sterilization techniques for media, containers and instruments. **07**
- Q.5** (a) Explain warm and cold trypsinization with help of neat and labeled diagram. **10**
(b) What is transgene construct? Explain with help of diagram. **04**
- OR**
- Q.5** (a) Explain the steps of in vitro fertilization. **10**
(b) What is transfection and transformation in case of animal tissue culture? **04**
