

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – SUMMER 2013

Subject Code: 180402**Date: 13/05/2013****Subject Name: Animal & 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) With the help of neat diagram explain the laboratory organization for tissue culture. **07**
- (b) Which technology is used to force the farmers to re-buy the seeds? With the help of neat diagram explain the role of the three genes involved in this technology. **07**
- Q.2** (a) Describe different kinds of sterilization techniques for the preparation of sterile media, containers & instruments. **07**
- (b) With the help of neat diagram explain preparation of single coverslip culture. **07**
- OR**
- (b) Write short notes on embryo transfer. **07**
- Q.3** (a) What is somaclonal variation? What are the steps to create somaclonal variation in PTC? **07**
- (b) Write short notes on haploid production. **07**
- OR**
- Q.3** (a) What are the techniques involved in protoplast isolation and fusion? **07**
- (b) Give applications of embryo culture, callus culture and organ culture. **07**
- Q.4** (a) Explain the culture procedure for animal tissue culture. **07**
- (b) What are the steps involved in warm and cold trypsinization? **07**
- OR**
- Q.4** (a) What is artificial skin? How it can be produced? **07**
- Q.4** (b) Differentiate between finite and continuous cell lines. **07**
- Q.5** (a) The role of promoter is crucial in the production of transgenic plant. Justify. **07**
- (b) How transgenic technology has proved itself superior to conventional breeding? **07**
- OR**
- Q.5** (a) How can we improve the storage quality of food? **07**
- (b) Insect resistance can be attained by transgenic technology. Support this by two examples. **07**
