

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII EXAMINATION – SUMMER 2015****Subject Code: 180402****Date: 11/05/2015****Subject Name: Animal & Plant Biotechnology****Time: 10.30AM-01.00PM****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) Define plant tissue culture and discuss its important applications. **07**
(b) Explain the principle of animal tissue culture. Comment on the laboratory organization for animal tissue culture. **07**
- Q.2** (a) What is sterilization? Why it is important in case of animal tissue culture? Explain the strategies of sterilization in case of animal tissue culture. **07**
(b) Comment on chemical and physical methods of sterilization followed in the plant tissue culture laboratory. **07**
- OR**
- (b) Comment on the establishment of animal cell lines. **07**
- Q.3** (a) Enlist various kinds of animal tissue culture techniques and describe any two. **07**
(b) Comment on targeted gene transfer technique. **07**
- OR**
- Q.3** (a) What is micropropagation? Discuss the procedure involved in it. **07**
(b) Define organogenesis and highlight its significance. **07**
- Q.4** (a) Comment on superovulation and Embryo Transfer technique. **07**
(b) Comment on the technique of In Vitro Fertilization. **07**
- OR**
- Q.4** (a) Explain in detail about Terminator Gene Technology. **07**
(b) How will you identify and isolate salt-tolerant gene and transfer it into plant? **07**
- Q.5** (a) Explain the procedure involved in the development of artificial skin. **07**
(b) Describe various applications of animal tissue culture. **07**
- OR**
- Q.5** (a) Highlight the advantages of plant tissue culture. **07**
(b) Comment on the development and use of artificial cartilage. **07**
