

(i) Printed Pages : 3]

Roll No. ....

(ii) Questions : 9]

Sub. Code : 

0	9	5	9
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Exam. Code : 

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**B.Sc. (Hons.) 4th Semester Examination**

**1047**

**BIOTECHNOLOGY**

**(Animal Biotechnology)**

**Paper : BIOT-Sem-IV-IV-T**

**Time : 3 Hours]**

**[Max. Marks : 67**

**Note :-** Attempt *five* questions in all. Q. No. 1 is compulsory.

Select *one* question from each Unit.

**Compulsory Question**

1. (a) What is the difference between hystiotypic and organotypic culture ?
- (b) What is a cell expression system ?
- (c) What is IVF.
- (d) What is electroporation ?
- (e) Name a method of cell imaging in 3D construct.

- (f) What is a scorable marker ?
- (g) Name two hormones produced using animal cells.
- (h) What is a stirrer culture ?
- (i) What is structure integrity in cell culture ?
- (j) What are chimeric antibodies ? 1½×10=15

### Unit-I

- 2. (a) Discuss the growth in organotypic culture.
- (b) Discuss the applications of organotypic culture. 7,6
- 3. (a) Discuss various components to form a 3D construct.
- (b) Describe how 3D construct can be imaged. 7,6

### Unit-II

- 4. (a) Discuss how a female is prepared for IVF.
- (b) Describe the role of cells in Culture Act as antigen presenters. 7,6
- 5. (a) Describe the embryo transfer in livestock.
- (b) Discuss the scale up for suspension cultures. 7,6

### **Unit-III**

6. (a) Describe two methods of gene transfer for transgenesis.
- (b) Discuss the role and method of clone selection using a selectable marker. 7,6
7. (a) What are the safety issues associated with transgenic animal production ?
- (b) Describe the application of transfection in environment protection. 7,6

### **Unit-IV**

8. (a) Discuss the method for monoclonal antibody production.
- (b) Explain the role of growth hormone production in animal cells. 7,6
9. Discuss the methods and applications of producing insulin in cell culture. 13