

Exam. Code : 107406

Subject Code : 1778

B.Sc.(Bio Technology) 6th Semester
BT-3 : ANIMAL BIOTECHNOLOGY

Time Allowed—2 Hours] [Maximum Marks—40

Note :— Attempt any **four** questions. All questions carry equal marks.

1. Define organ culture. Discuss at least three methods of organ culture and also write the advantages of organ culture.
2. What is differentiation ? What are the stages of differentiation ? Discuss various physiological and non-physiological inducers of differentiation.
3. (a) Discuss in detail why do we need to express gene of mammalian origin in mammalian host ?
(b) Discuss various objectives of gene transfer in mammalian cells.
4. Define transfection. Discuss microinjection, electroporation and DEAE Dextran methods of transfection in detail.
5. What do you mean by scale up ? Discuss various factors affecting scale up and also discuss bioreactor for scale up of anchorage dependent cells.

6. What are stem cells ? Differentiate between adult and embryonic stem cells. Write down their properties and applications.
7. Write short notes on :—
 - (a) IVF and Embryo transfer.
 - (b) Genetic engineering in the production of blood clotting factor.
8. Discuss the general strategy for the production of transgenic animals. Discuss applications of transgenic animals.