

**Exam. Code : 107406**

**Subject Code : 1878**

**B.Sc. (Biotechnology) 6th Semester**

**BT-3 ANIMAL BIOTECHNOLOGY**

Time Allowed—3 Hours] [Maximum Marks—40

**Note** :— Section A is compulsory. Section B : Attempt any 5 questions. The answer should not exceed two pages. Section C : Attempt any 2 questions. The answer should not exceed five pages.

**SECTION—A (1×8=8)**

**(Compulsory) Write a brief account of the following :**

1. W1 38, IMR 90 cell line origin.
2. Characteristic features which are marked for a cell line when they are raised
3. Expression vector
4. Microinjection
5. Nunc Factories
6. Microcarriers
7. Genetically engineered blood products in the market.
8. Need to raise transgenic cattle.

**SECTION—B (5×4=20)**

1. Characteristic features and application of HEK 293 and C7.
2. How to raise organ culture ?
3. What is the need of animal cells in expression of proteins ?
4. What are promoters and their function in transgenics ?
5. Give the methodology of Monoclonal antibodies production.
6. Describing the characteristic features of embryonic stem cells give their applications.
7. Explain the methodology of embryo transfer technology.
8. Write a note on Transgenic goats.

**SECTION—C (6×2=12)**

1. Explain differentiation, dedifferentiation and redifferentiation with an example.
2. Compare and contrast the calcium phosphate precipitation and DEAE dextran mediated transfection method.
3. Write an account on various types of Bioreactors for the scale up of suspension cultures.
4. How genetic engineering and animal cell culture made it feasible to raise vaccines for viral infections ? Explain with one example.