

B.Sc. (CBCS Pattern) Semester-VI
BIO2 - Biotechnology Paper-II : Animal Biotechnology

P. Pages : 2

Time : Three Hours



GUG/W/24/13324

Max. Marks : 50

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- Notes : 1. Draw well labelled diagram wherever necessary.
2. All questions are compulsory and carries equal marks.

1. What is animal cell culture? Discuss different systems of animal cell culture. **10**

OR

- a) Write note on, balanced salt solution. **2½**
- b) What is serum? Explain its physiological role in animal cell culture media. **2½**
- c) What is contact inhibition? Explain. **2½**
- d) Describe synthetic media used in cell culture. **2½**

2. Describe different enzymatic methods for isolation of cell in animal cell culture. **10**

OR

- a) What is cryopreservation? Explain. **2½**
- b) What is Germplasm? Discuss one method for Germplasm preservation. **2½**
- c) Discuss suspension culture. **2½**
- d) Explain different properties of cell in primary culture. **2½**

3. What is Embryonic stem cell? Describe culture of stem cell with their applications. **10**

OR

- a) What is cell cloning? Explain. **2½**
- b) Discuss cell synchronization. **2½**
- c) What is apoptosis? Discuss role of cytochrome C in apoptosis. **2½**
- d) Discuss cell transformation. **2½**

4. What is transgenic animal? Discuss production of Dolly sheep by cloning. 10

OR

a) What is IVF? Discuss Embryo transfer technique in humans? 2½

b) Discuss Embryo cloning. 2½

c) What is artificial insemination? Give its advantages. 2½

d) Discuss production of insulin by cell culture in brief. 2½

5. Answer **any ten** of the following. 10

a) Define Tissue culture.

b) Give one advantage of serum free media.

c) What is anchorage dependence?

d) What is animal cell culture?

e) What is cell line?

f) What is secondary culture?

g) What is cell manipulation?

h) Name cell organelles involved in apoptosis.

i) What is 3D culture?

j) Define vaccine.

k) Name the scientist who developed first mammal clone.

l) What is embryonic stem cell?
