

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

P. Pages : 2

Time : Three Hours



GUG/W/23/13324

Max. Marks : 50

---

Note : All questions are compulsory.

1. Explain various systems of animal tissue culture with its advantages and limitations. **10**
- OR**
- a) Discuss about natural media. **2½**
- b) Give the chemical functions of different constituents of culture medium. **2½**
- c) Write a note on cell-cell communication. **2½**
- d) Describe the role of CO<sub>2</sub> in culture medium. **2½**
2. What is isolation of cell? Discuss various methods of separation of cell types. **10**
- OR**
- a) Give the information about suspension culture. **2½**
- b) Discuss the behaviour of cells in primary culture. **2½**
- c) Write a note on germplasm conservation. **2½**
- d) Describe explant culture. **2½**
3. What is stem culture? Give the information about embryonic stem cells with its application. **10**
- OR**
- a) Discuss the role of cytochrome C in apoptosis. **2½**
- b) Give the information about cell cloning. **2½**
- c) Write a note on cell synchronization. **2½**
- d) Discuss about three dimensional culture. **2½**
4. Explain in detail about In vitro fertilization technology. **10**
- OR**
- a) Describe the production of vaccine. **2½**
- b) Write a note on artificial insemination. **2½**
- c) Give the information about transgenic animal. **2½**
- d) Discuss about the production of Insulin. **2½**

**5.** Attempt **any ten**. (One mark each)

- a) Define cell culture. **1**
- b) What is synthetic media? **1**
- c) What is the role of serum in culture media? **1**
- d) Define primary culture. **1**
- e) What is Cryopreservation? **1**
- f) What is germplasm? **1**
- g) Define apoptosis. **1**
- h) What is cell manipulation? **1**
- i) Enlist any two applications of embryonic stem cells. **1**
- j) What is the role of insulin in human body? **1**
- k) What is the importance of vaccine? **1**
- l) Give the full form of IVF. **1**

\*\*\*\*\*