

**USCZOT14 - DSE - Core Paper-XIV - Zoology Paper-II : Animal Biotechnology**

P. Pages : 1

Time : Three Hours



**GUG/W/23/13371**

Max. Marks : 50

- Notes :
1. All questions are compulsory.
  2. All questions carry equal marks.
  3. Draw labelled diagram wherever necessary.

1. Describe types of media for animal cell and tissue culture. **10**

**OR**

a) Scope of biotechnology. **5**

b) Advantages and disadvantages of tissue culture. **5**

2. Write in detail on Cloning vectors. **10**

**OR**

a) Sanger method. **5**

b) PCR. **5**

3. Write in detail applications of transgenic animals. **10**

**OR**

a) Artificial insemination. **5**

b) Vector based gene transfer. **5**

4. Explain hybridoma technology and production of monoclonal antibody **10**

**OR**

a) Sickle cell anemia. **5**

b) Gene therapy. **5**

5. Write in 4 or 5 lines each of the following **any ten**. **10**

i) Primary Culture

ii) Master cell bank

iii) Sterilant

iv) Primer

v) RNAase H

vi) Annealing

vii) Transfection

viii) Intratubal Insemination

ix) SCNT

x) Sickle Crisis

xi) Proinsulin

xii) Naked DNA

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