

Bachelor of Science (B.Sc.) Semester–VI (C.B.S.) Examination**PLANT AND ANIMAL BIOTECHNOLOGY****Paper—2****(Biotechnology)**

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Describe the composition and preparation of MS medium. 10

OR

Write notes on :

(a) Cell suspension culture 5

(b) Maintenance of callus. 5

2. Describe protoplast culture technique, in detail. 10

OR

Write notes on :

(a) Micropropagation 5

(b) Transgenic plants. 5

3. Write notes on :

(a) Maintenance of cell lines in ATC 5

(b) Primary culture in ATC. 5

OR

(c) Contact inhibition and Anchorage dependence. 5

(d) Cell-cell communication. 5

4. Write notes on :

(a) In-vitro fertilization in farm animals. 5

(b) Gene therapy. 5

OR

(c) Production of Hepatitis vaccine. 5

(d) Transgenic animals. 5

5. Solve any ten of the following :

(i) What is a thermolabile hormone ? 1

(ii) What is the role of chelating agent in plant tissue culture media ? 1

(iii) What is a callus ? 1

(iv) What is diplodization ? 1

(v) What are cybrids ? 1

(vi) What is T_1 plasmid ? 1

(vii) What is passaging ? 1

(viii) What is the use of CO_2 incubator ? 1

(ix) What is Hayflick's limit ? 1

(x) What is the application of r-DNA technology in medicine ? 1

(xi) What are recombinant DNA vaccines ? 1

(xii) What is the role of insulin ? 1