

**B.Pharm Eighth Semester (C.B.S.) Examination****PHARMACEUTICAL BIOTECHNOLOGY AND MOLECULAR BIOLOGY****Paper—2**

Time : Three Hours]

[Maximum Marks : 80

**N.B. :—** (1) Question No. 1 is compulsory.(2) Solve any **four** questions from remaining.

(3) Draw neat labelled diagram wherever necessary.

1. Solve any **five** questions of the following :

(a) Explain in brief on Western Blotting.

(b) Write a note on Mammalian cell cultures.

(c) Write on Gene cloning.

(d) Explain the Fermentation Medium.

(e) Write on Cellular totipotency.

(f) What is meant by Fermentation Monitoring ?

(g) Explain the Monoclonal Antibodies.

5×4=20

2. Define Fermenter Medium. Explain in detail construction, working and types of Fermenter. 15

3. (a) Write about the different Plant Cell Culture techniques. 10

(b) Explain Disaggregation of Tissue. 5

4. Define Immobilization. Describe various methods of immobilization and discuss its advantages and disadvantages. 15

5. (a) Give a detailed account on Isolation of Vitamin B<sub>12</sub>. 10

(b) Write the application of immobilized cell and enzymes. 5

6. What is recombinant DNA Technology ? And enlist the tools for r-DNA Technology. 15

7. Write short notes (any **three**) :

(a) Genetic recombination in animal cell

(b) Cloning vector

(c) Media for Cultivation of animal cell

(d) Colony Hybridization.

5×3=15