

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122]

**JANUARY 2022
(MARCH 2021 EXAM SESSION)**

Sub. Code: 2066

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER VI
PAPER IV – PHARMACEUTICAL BIOTECHNOLOGY
Q.P. Code : 562066**

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Discuss the Hybridoma technology with production and applications.
2. Explain the production of Insulin by genetic engineering technology.
3. Describe working principle, types and application of Biosensor.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Discuss the Production of Citric acid by fermentation method.
2. Write the technique of Immobilization of Enzyme.
3. Describe the production of Penicillin by fermentation method.
4. Explain Transposable elements with examples.
5. Discuss Biotransformation reaction of Steroids.
6. Write briefly steps involved in Polymerase chain reaction (PCR).
7. What are the methods of conversion of Toxin to Toxoids?
8. Explain the types of Sparger used in Fermentation vessel.
9. Write the various Types of Immunity with example.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Use of western blot test.
2. Name High yield producing organism of glutamic acid.
3. Define Restriction endonuclease
4. What is immunosuppressant?
5. What are Plasma substitutes?
6. Write the applications of Southern Blotting
7. Define Plasmid.
8. What are the classes of Antibody?
9. Define Hypersensitivity reactions
10. Give two examples for Living Bacterial Vaccines.
