

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

**[B.PHARM 0524]**

**MAY 2024**

**Sub. Code: 2066**

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)  
PCI Regulation 2017 – SEMESTER VI  
PAPER V – PHARMACEUTICAL BIOTECHNOLOGY**

*Q.P. Code: 562066*

**Time: Three hours**

**Maximum: 75 Marks**

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

1. Explain the principle and various steps involved in western blotting technique. Add a note on its applications.
2. Explain in detail the production of Vitamin B12.
3. What are Interferons? Explain the methods of production of Interferons.

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

1. Write a short note on Plasma substitutes.
2. Discuss the different types of mutation.
3. Explain the types of Biosensors.
4. Discuss the production of the enzyme Protease.
5. Explain the steps involved in Polymerase Chain Reaction technique.
6. Write a note on foam control and temperature control in fermenter.
7. Applications of genetic engineering.
8. Functions of Major Histocompatibility Complex.
9. Discuss about Hypersensitivity reactions.

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

1. Active immunity.
2. Define Sparger.
3. What is bio-transformation process?
4. Define Immobilization.
5. What is mutagenesis?
6. What is Hybridoma technology?
7. Write the storage conditions for the Hepatitis B vaccine.
8. What is batch fermentation?
9. Any two applications of Elisa.
10. Define Conjugation.

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