

QP Code: 625006

Reg. No.....

**Sixth Semester B. Pharm Degree Regular/Supplementary
Examinations November 2025
Pharmaceutical Biotechnology
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Describe the production of citric acid by fermentation technology.
2. What are biosensors. Explain the types with pharmaceutical applications.

Short Notes

(7x5=35)

3. Describe the production and uses of amylase.
4. List out different blood products and their applications.
5. Write in brief structure and function of MHC.
6. Describe the technique of Polymerase Chain Reaction (PCR).
7. Explain microbial biotransformation with examples.
8. What are restriction enzymes. Explain the types and their role in genetic engineering.
9. What are cloning vectors. Explain the features of any two in detail.

Answer Briefly

(10x2=20)

10. Mutants.
11. Role of immobilized enzyme in microbial biotransformation.
12. What are different types of aerators.
13. List out any four advantages of Enzyme Immobilization.
14. Write any four properties of Immunoglobulin G.
15. Expand ELISA and write two applications.
16. Write the therapeutic uses of plasma substitutes.
17. Write any four pharmaceutical applications of biotechnology.
18. What are the conditions for storage of official vaccines.
19. Write the role of T-lymphocytes cell in immune reaction.
