

**Third Professional B. Pharm (Ayurveda) Degree Supplementary
Examinations August 2025
Pharmaceutical Microbiology & Biotechnology**

Time: 3 Hours

Total Marks: 100

- 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
- Write Section A and Section B in separate answer books (32 Pages). Do not mix up questions from section A and section B

QP CODE: 304008**Section A- Microbiology****Marks: 50****Essay:****(10)**

1. Discuss the nutritional requirements of bacteria. What are the various culture media used in bacterial culture

Short notes:**(5x5=25)**

2. Discuss the function and structure of flagella
3. Write a note cultivation of fungi
4. Explain acid fast staining
5. Write a note on test for disinfectants
6. Explain dry heat sterilization

Answer briefly:**(5x3=15)**

7. What is Gram's staining
8. Gaseous sterilization techniques
9. Types of immunity
10. What is microbial assay
11. ELISA test

QP CODE: 308008**Section B - Biotechnology****Marks: 50****Essay:****(10)**

1. What is Recombinant DNA technology. Explain the methods of genetic recombination.

Short notes:**(5x5=25)**

2. Discuss the preparation of vaccines
3. Antigen- antibody reactions.
4. Monoclonal antibodies
5. Discuss the production of Humulin
6. Production of streptomycin

Answer briefly:**(5x3=15)**

7. Biotransformation process
8. Applications of enzyme immobilization
9. Factors affecting enzyme kinetics
10. Note on proteases
11. Antimicrobial spectrum
