

Reg. No.....

**Third Professional B. Pharm (Ayurveda) Degree Regular/Supplementary
Examinations March 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. What is bacterial staining. Write a note on bacterial staining techniques

Short notes:

(5x5=25)

2. Discuss the composition and function of bacterial cell wall
3. Write a note on classification of virus
4. Write a note on nutritional requirements of bacteria
5. Discuss various evaluation test for disinfectants
6. Discuss moist heat sterilization

Answer briefly:

(5x3=15)

7. Classify bacterial culture media
8. Rideal – Walker coefficient
9. Chemical sterilization
10. What is microbial assay
11. What is immunity

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. What is hypersensitivity. Write a note on antigen antibody reactions

Short notes:

(5x5=25)

2. Explain transduction and conjugation
3. Explain the production of penicillin
4. Write a note on vaccines
5. Discuss the production of vitamin B₁₂
6. What is gene cloning. What are their applications

Answer briefly:

(5x3=15)

7. Types of mutation
8. Factors affecting enzyme kinetics
9. Immobilization of enzymes
10. Hyaluronidase enzyme
11. ELISA test
