

Reg. No.....

**Third Professional B. Pharm (Ayurveda) Degree Regular/Supplementary
Examinations March 2026
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. Classify various methods of sterilization. Explain moist heat sterilization in detail

Short notes:

(5x5=25)

2. What are the factors affecting disinfectants action
3. Discuss bacterial growth curve
4. Structure of bacterial cell
5. Cultivation of virus
6. Microbiological assay of antibiotics

Answer briefly:

(5x3=15)

7. Negative staining method
8. Scope of microbiology
9. Classification of virus
10. Microbial resistance
11. Classify culture media

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. Explain the fermentation process for production of penicillin and tetracycline

Short notes:

(5x5=25)

2. Streptokinase
3. Enzyme immobilization
4. Monoclonal antibodies
5. Enumerate the characteristics of an ideal fermenter
6. Antigen - Antibody reaction

Answer briefly:

(5x3=15)

7. Hybridoma
8. Biotransformation
9. Bacterial transduction
10. Application of cloning
11. List out the factors affecting enzyme kinetics
