

**Third B. Pharm (Ayurveda) Degree Regular/Supplementary Examinations
March 2023**

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 bacterial staining in detail. Add a note on Acid fast staining.

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

2. Microbial assay of vitamins.
3. Explain cultivation of virus.
4. Anaerobic culture method.
5. Evaluation test for disinfectants.
6. Different methods of sterilization.

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

7. Primary defensive mechanism of body.
8. Culture media and Types.
9. Morphological classification of fungus.
10. Types of flagella.
11. Briefly explain immunity.

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

1. Discuss the fermentative production of penicillin.

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

2. Write a note on immunological tolerance.
3. Hybridoma technology.
4. Explain Conjugation.
5. Standardization of vaccine.
6. Antigen- antibody reaction.

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

7. Application of cloning.
8. Streptokinase and streptodernase.
9. Explain screening of soil for organism producing antibiotics.
10. Active and passive immunization.
11. Mutation.
