

Reg. No.....

**Third B.Pharm (Ayurveda) Degree Regular/Supplementary Examinations
April 2021
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. Define disinfection. Explain evaluation of disinfectants.

Short notes:

(5x5=25)

2. Explain Gram's staining.
3. Classification of culture media.
4. Write a note on Microbial genetics.
5. Explain sterility test for water for injection.
6. Isolation of bacteria.

Answer briefly:

(5x3=15)

7. Methods used for dry heat sterilization.
8. Staining technique used for Mycobacterium tuberculosis.
9. Differences between pili and fimbriae.
10. Functions of bacterial capsule.
11. Secondary defensive mechanism of body

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. Write a note on Immune system. Add a note on Antigen- antibody reaction and their applications.

Short notes:

(5x5=25)

2. The fermentation method for tetracycline production.
3. Hybridoma technology.
4. Gene cloning and their application.
5. Isolation of mutants.
6. Biotransformation processes and its importance with special reference to steroids.

Answer briefly:

(5x3=15)

7. BCG vaccine.
8. Type I hypersensitivity reaction.
9. Storage of vaccines.
10. Humulin.
11. Factors influencing rate of mutation.
