

Reg. No.....

**Third B. Pharm (Ayurveda) Degree Supplementary Examinations
September 2022
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 and classify sterilization methods and describe the construction and working of an autoclave with a neat labeled diagram.

Short notes:

(5x5=25)

2. Write a note on nutrient media and their application.
3. Explain bacterial reproduction.
4. Enumerate Microbial resistance.
5. Structure of bacterial cell.
6. Difference between prokaryotes and eukaryotes.

Answer briefly:

(5x3=15)

7. Interferon.
8. Principle of Gram's staining technique.
9. Difference between antiseptic and disinfectant.
10. Classification of virus.
11. Electron microscopy.

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. Discuss the preparation and applications of monoclonal antibodies.

Short notes:

(5x5=25)

2. Write briefly about microbial transformation.
3. Historical development of antibiotics.
4. Techniques of enzyme immobilization.
5. Discuss hypersensitivity
6. Design and working of fermenter.

Answer briefly:

(5x3=15)

7. Poliomyelitis vaccine.
8. Antigens and Haptens.
9. Types of reactions mediated by micro-organisms.
10. Cellular and humoral immunity.
11. Transduction.
