

**Third B.Pharm (Ayurveda) Degree Supplementary Examinations,
April 2017**

Pharmaceutical Microbiology & Biotechnology

Time: 3 Hours

Total Marks: 100

- Answer all questions.
- 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. Describe assay of antibiotics. Explain any one method in detail

Short notes:

(5x5=25)

2. Interferones
3. Gaseous sterilization
4. Working of electron microscope
5. Classification of fungi
6. Basic nutritional requirements of bacteria

Answer briefly:

(5x3=15)

7. Endospore
8. Structure of fungi
9. Antiseptics
10. Anaerobic culture method
11. Rideal-Walker coefficient

QP CODE: 308008

Section B - Biotechnology

Marks:50

Essay:

(10)

1. Explain different techniques used for enzyme immobilization

Short notes:

(5x5=25)

2. Applications of monoclonal antibodies
3. Design and working of fermenter
4. Advantages of microbial transformation
5. Standardization of vaccine
6. Humalin

Answer briefly:

(5x3=15)

7. Steps in gene cloning
8. Types of bacterial spores
9. Polio myelitis vaccine
10. Passive immunization
11. Conjugation