

Third Year B.Pharm (Ayurveda) Degree Examinations, October 2016

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 the different staining techniques. Explain principle and procedure of gram staining.

Short notes:

(5x5=25)

2. Defense mechanism of body
3. Validation of sterilization methods
4. Mutation
5. Disinfectants and their evaluation
6. Give one method of assay of antibiotics

Answer briefly:

(5x3=15)

7. Sterilization by radiation
8. Classification of virus
9. Bacterial culture media
10. Microbial resistance
11. Sterility testing by membrane filtration

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. Discuss the types of hypersensitivity reactions

Short notes:

(5x5=25)

2. Enzyme immobilization
3. Hybridoma
4. Gene cloning
5. Application of antigen-antibody reaction
6. Biotransformation process

Answer briefly:

(5x3=15)

7. Standardization of immunological products
8. Cellular and humoral immunity
9. Structure of bacteria
10. Application of monoclonal antibody
11. Antigens and haptens
