

Reg.No.....

Third Year B.Pharm(Ayurveda) Degree Examinations, October 2014

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:

(1x10=10)

1. Explain the structure of a bacterial cell in detail.

Short notes:

(5x5=25)

2. Contribution of Koch, Lister and Pasteur in the development of microbiology.
3. Name the common and special constituents of culture media and describe their functions.
4. Nutritional requirements of bacteria.
5. Viral cultivation.
6. Biological indicators and name the organisms used as sterility indicators for different methods of sterilization.

Answer briefly:

(5x3=15)

7. Autoclave.
8. Classification of disinfectants.
9. Bacteriophage.
10. Microbiological assay of calcium pantothenate.
11. 'Hypha', 'conidia', 'conidiophore'.

QP CODE:308008

Section B - Biotechnology

Marks:50

Essay:

(1x10=10)

1. Explain active and passive immunity. Define vaccines and add a note on the preparation of any of three vaccines & its storage.

Short notes:

(5x5=25)

2. Gene cloning and its applications.
3. Define toxoids and mention tetanus toxoid.
4. Antigen antibody reactions.
5. Micro organisms mediated types of reactions
6. Factors influencing enzyme kinetics.

Answer briefly:

(5x3=15)

7. Activase.
8. Advantages of enzyme immobilization.
9. Air lift type of fermentors.
10. Preparation of vinegar by microbial transformation.
11. Define mutation, mutagens and mutants.
