

**Third Semester Examination For the Degree
of Bachelor of Pharmacy**

**PHARMACEUTICAL MICROBIOLOGY AND
IMMUNOLOGY – I**

3T5

Time : Three Hours]

[Max. Marks : 80

- N. B. : (1) Question No.1 is Compulsory.
 (2) Attempt any Four questions from the remaining.
 (3) Draw neat labeled diagram wherever necessary.
 (4) Discuss the reaction, mechanism wherever necessary.
 (5) Use of electronic calculator is permitted.
 (6) Assume suitable data wherever necessary.

1. Solve any **Five** of the following :—

- (a) Differentiate bacteria and fungi.
- (b) Classify microbes on the basis of temperature requirement for their growth.
- (c) Write principle of SEM.
- (d) Give structure of bacteriophage
- (e) Name the causative agent for :—
 - (1) Tuberculosis
 - (2) Leprosy
 - (3) Syphilis

- (4) Typhoid
- (f) What is Lysogeny ?
- (g) What are spores ? 20

2. (a) Write about principle and working of Fluorescence and phase contrast microscope. 8
- (b) Explain various methods of isolation and preservation of microbial cultures. 7

3. Write about the etiology, pathophysiology, transmission, prevention and treatment of any three of the following :
 - (a) AIDS
 - (b) Cholera
 - (c) Influenza
 - (d) Malaria 15

4. (a) Discuss about the contribution of Robert Koch and Paul Ehrlich. 7
- (b) Explain the different phases of bacterial growth curve. Also add a note on measurement of bacterial growth. 8

5. (a) Explain the lytic growth cycle of bacteriophage. 7
- (b) Discuss the methods for cultivation of viruses. 8

6. (a) Explain different types of genetic mutation with an account of mutagenic agent. 7
- (b) Explain in detail genetic recombination in bacteria by transduction. 8
7. (a) Classify fungi. Discuss reproduction in fungi. 8
- (b) Explain the role of microbiology in Pharmaceuticals. 7