

NTK/KW/15/6985

Faculty of Pharmacy

B.Pharm. Third Semester (C.B.S.) Examination

PHARMACEUTICAL MICROBIOLOGY AND
IMMUNOLOGY—I

Paper—V

Time : Three Hours]

[Full Marks : 80

N.B. :— (1) Question No. **1** is compulsory.

- (2) Solve any **FOUR** questions from the remaining.
- (3) Draw neat labeled diagram wherever necessary.
- (4) Use of electronic calculator is permitted.

1. Answer the following (any **five**) : 4×5=20

- (a) Give the contributions of Antony Van Leeuwenhoek.
- (b) Discuss the economic importance of fungi.
- (c) Comment on mutagenic agents.
- (d) Explain the growth curve of bacteria.
- (e) Write a note on plasmids.

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| (f) Define different types of bacteria based on temperature requirements. | | (b) Etiology, patho physiology, transmission, prevention and treatment of <i>any one</i> disease : |
| (g) Comment on AIDS. | | (i) Cholera |
| 2. (a) Discuss the scope and applications of microbiology to pharmaceuticals. | 8 | (ii) Tuberculosis |
| (b) Discuss the contributions of Louis Pasteur. | 7 | (iii) Typhoid. |
| 3. Give the classification of microscopes. Describe in detail types of electron microscopes-SEM and TEM. | 15 | (c) Replica plate technique. |
| 4. (a) Explain the methods of measurement of bacterial growth. | 8 | (d) Nutritional requirements of bacteria. |
| (b) Describe the different types of culture media. | 7 | |
| 5. (a) Explain recombination in bacteria by conjugation. | 8 | |
| (b) Explain the cell wall of bacteria. | 7 | |
| 6. (a) Describe the lysogenic cycle in bacteriophage. | 8 | |
| (b) Explain the structure of virus with a well labelled diagram. | 7 | |
| 7. Write short notes on any three : | 3×5=15 | |
| (a) Reproduction in fungi. | | |