

B. Pharm. Third Semester (C.B.S.) Examination
PHARMACEUTICAL MICROBIOLOGY AND IMMUNOLOGY-I
Paper-5

Time : Three Hours]

[Maximum 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) Discuss the reaction, mechanism wherever necessary.
(5) Use of electronic calculator is permitted.
(6) Assume suitable data wherever necessary.

1. Solve any **five** questions :
 - (a) Give the contributions of Louis Pasteur in the field of microbiology.
 - (b) Comment on 'Cedar wood oil increases resolution power of microscope'.
 - (c) Write the functions of capsule.
 - (d) What are transposons and plasmids ?
 - (e) Explain the size, shape and morphology of virus.
 - (f) Explain the types of bacteria based on temperature requirement.
 - (g) Differentiate between selective media and differential media. 5×4=20
2. What is bacterial recombination ? Explain the different types of recombination in bacteria. 15
3. (a) Explain the techniques used for measurement of bacterial growth. 8
(b) Explain in detail the structure of cell wall of gram+ve and gram-ve bacteria. 7
4. (a) Discuss the biochemical tests for identification of bacteria. 8
(b) Explain the process of protein synthesis. 7
5. (a) Explain in short different techniques used for cultivation of viruses. 8
(b) Describe the lytic cycle of bacteriophage. 7

6. (a) Discuss the principle and applications of dark field microscopy and phase contrast microscopy.

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(b) Discuss the etiology, patho physiology, transmission, prevention and treatment of any **two** :

(i) Tuberculosis

(ii) AIDS

(iii) Typhoid

(iv) Malaria.

3.5×2=7

7. Write short notes on (any **three**) :

(a) Scope and applications of microbiology in pharmaceuticals

(b) Micobiology of fungi

(c) Types of mutation

(d) Replica plate technique.

5×3=15