

Subject Code: B132104/R13

II B. Pharmacy I Semester Regular Examinations Dec/Jan – 2014-15

PHARMACEUTICAL MICROBIOLOGY

Time: 3 hours

Max. Marks: 70

**Question Paper Consists of Part-A and Part-B
Answering the question in Part-A is Compulsory,
Three Questions should be answered from Part-B**

PART-A

1. (i) Write the differences between prokaryotes and eukaryotes.
(ii) Explain the different types of nutrient media.
(iii) Describe briefly the techniques of preservation of microbial cultures.
(iv) Explain the mode of action of antimicrobial agents.
(v) What are different types of mutagens, explain the mode of action of physical mutagens.
(vi) Write principle and methods involved in assay of antibiotics. [3+3+4+4+4+4]

PART-B

2. (a) Explain the prokaryotic cell structure with a neat labeled diagram
(b) Discuss the pharmaceutical significance of bacteria and viruses. [8+8]
3. (a) Explain the origin and scope of pharmaceutical microbiology.
(b) Discuss about the different techniques of isolation of microorganisms. [6+10]
4. (a) Explain the effects of environmental factors on bacterial growth and mention the different stages of bacterial growth curve.
(b) Write about construction and operation of an autoclave with a neat diagram. [10+6]
5. (a) Discuss about the genetic recombination and gene regulation in bacteria.
(b) Explain the official methods for sterility testing of pharmaceuticals? [8+8]
6. Discuss about the etiology, source of infection, diagnosis, mode of transmission and prevention and control of the following diseases.
 - (a) Tuberculosis
 - (b) Bacillary dysentery
 - (c) Infective hepatitis
 - (d) Syphilis [4+4+4+4]
7. (a) Write the microbial source and applications of following pharmaceutical products
 - (i) Antibiotics
 - (ii) Amino acids
(b) Define disinfectant with few examples. Discuss about their mechanism of action. [8+8]



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