

**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**

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**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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