

**FACULTY OF SCIENCE**

**M.Sc. II-Semester Examination, May / June 2017**

**Subject: Microbiology  
Paper- IV  
Pharmaceutical Microbiology**

**Time : 3 Hours**

**Max. Marks: 80**

**PART – A (8x4=32 Marks)  
(Short Answer Type)**

1. Antimicrobials as preservatives
2. Spoilage of pharmaceutical products
3. Antitubercular Compounds
4. Non – medical uses of antibiotics
5. Nystatin
6. Choice of drug
7. ELISA
8. Phenol coefficient

**PART – B (4x12=48 Marks)  
(Essay Answer Type)**

- 9.(a) Explain how the antimicrobial agents be used as preservatives for pharmaceutical products.  
**OR**  
(b) Discuss on the types of microorganisms occurring in pharmaceutical products.
- 10.(a) What are antibiotics? Write the types of antibiotics and their classification.  
**OR**  
(b) Write an essay on testing methods and preservation in cosmetic microbiology.
- 11.(a) What are Betalactams? Explain their mode of action and significance.  
**OR**  
(b) Explain the principles of chemotherapy adding a note on the usage of drugs.
- 12.(a) Highlight on the biochemistry and genetics of drug resistance in bacteria.  
**OR**  
(b) What are nutritional mutants, write about their significance in pharmaceutical industries.

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