

**FACULTY OF PHARMACY**

**B. Pharmacy III - Semester (PCI) (Main & Backlog) Examination, April 2024**

**Subject: Pharmaceutical Microbiology**

**Time: 3 Hours**

**Max. Marks: 75**

**PART-A**

**Note: Answer all the questions.**

**(10 x 2 = 20 Marks)**

1. What is the role of agar in culture media?
2. Explain the bacterial growth curve.
3. Write about autotrophs and chemotrophs.
4. Write short notes on sterility indicators.
5. Explain about isolation of pure culture.
6. What is meant by MIC and antibiotic?
7. Give the different sources of contamination in aseptic area.
8. List out sources of microbial contaminations in pharmaceuticals.
9. Write in detail about viruses.
10. Enumerate the differences between sterilization and disinfection.

**PART-B**

**Note: Answer any two questions.**

**(2 x 10 = 20 Marks)**

11. Explain in detail about the principle and working of an instrument used in moist heat sterilization.
12. Classify disinfectants. Write the mechanism of action and uses of phenolic disinfectants.
13. (a) Give the composition of various media used in the sterility testing of pharmaceutical products.  
(b) What are various approved methods of Sterility testing?

**PART-C**

**Note: Answer any seven questions**

**(7 x 5 = 35 Marks)**

14. Differentiate between gram positive and Gram negative cell wall.
15. Explain in detail about Filtration sterilization with merits and demerits.
16. Write briefly about various stages of sterility testing of ophthalmic products.
17. Explain about various factors affecting disinfectants.
18. Explain in detail about replication of fungi.
19. Describe the general procedure of antibiotic assay
20. Discuss in detail about growth of animal cells in culture.
21. Explain in detail about casein hydrolysis by microorganisms.
22. Explain various types of microbial spoilage.