

KATHMANDU UNIVERSITY
End Semester Examination
January/February, 2025

Level : B.Pharm.
Year : I
Time : 2 hrs. 30mins.

Course : PHAR 113
Semester : II
F. M. : 55

06 Feb 2025

Check (✓) the number of each question of Section B, C and D you have answered in the front page of main answer book.

SECTION "B"

[5 Q. × 3 = 15 marks]

Attempt ANY FIVE questions.

1. Outline the different types of microscopes.
2. Explain the Indole test and Voges-Proskauer Test [VP-Test].
3. State the general principle on Endospore Staining of bacteria.
4. Differentiate between selective media and differential media.
5. Write about performance qualifications.
6. Write about tyndallization and pasteurization?
7. What kind of organism are actinomycetes? How are they important to medical science and agriculture? Write about its mode of nutrition.

SECTION "C"

[5 Q. × 5 = 25 marks]

Attempt ANY FIVE questions.

8. What is death rate curve? Explain D value on the basis of death rate curve. Define Z value with its significances. [1+2+2]
9. Explain antibiotic resistance (ABR) with a suitable example? What are the reasons for the increase in ABR in Nepal? [2+3]
10. Write about the causative agent of syphilis? How is it spread? What are the treatment strategies for syphilis? [1.5+1.5+2]
11. Define antiseptic, disinfectant and preservative with examples. How can the Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) be determined? [2.5+2.5]
12. Outline the particle and microbial limit criteria for a cleanroom in Class 100 and Class 100,000. How should walls, ceilings, and equipment be considered during cleanroom construction? [2.5+2.5]

13. Differentiate between streak culture and stab culture. Describe the culture method using GASPAK for anaerobic bacterial culture. [2+3]
14. What is the principle of sterility test? Explain the importance of positive and negative controls in the test. State the criteria for result interpretation in a sterility test. [1+2+2]

SECTION "D"

[2 Q. × 7.5 = 15 marks]

Attempt ANY TWO questions.

15. What are the causative agents of enteric fever and AIDS? Describe the Widal test for the diagnosis of enteric fever. What are the three symptoms which are known to be AIDS related complex (ARC)? Give four major modes of transmission for AIDS. Protease inhibitor is a type of drug used in AIDS. Mention its mechanism of action. [1+2+1.5+2+1]
16. Differentiate between active and passive immunization. Discuss the immunological products used for active and passive immunization. Share your opinion on the COVID-19 vaccine. [2.5+2.5+2.5]
17. Define pyrogen. Compare the SHAM test and the LAL test. Describe the procedure and interpretation of the SHAM test. [1+2.5+4]