

KATHMANDU UNIVERSITY
End Semester Examination c.
April/May, 2023

Marks Scored:

Level : B.Pharm.
Year : I

Course : PHAR 113
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date 04 APR 2023

SECTION "A"

[20 Q. × 1 = 20 marks]

Encircle the most appropriate option.

- Father of microbiology is
 - Louis Pasteur
 - Lister
 - A.V. Leeuwenhock
 - Robert Koch
- Endotoxin produced by gramnegative bacteria is present in
 - Peptidoglycan
 - Lipopolysaccharide
 - Theichoic acid
 - Inner membrane
- TAB vaccination is a
 - Passive immunization
 - Active immunization
 - Neonatal immunization
 - Combined immunization
- Ethylene Oxide is a highly toxic agent, which destroys microorganisms by a process called :
 - cavitation
 - oxidation
 - osmosis
 - alkylation
- Which of the following procedures can be used to isolate a pure culture of a bacterium from a mixture?
 - Streak plating
 - Broth Dilution
 - Enrichment culture
 - All of these
- Segmented RNA is seen in
 - Rabies virus
 - Coxsackie B virus
 - Influenza virus
 - All of these
- All of the following are true about agar except it
 - is a polysaccharide derived from a red algae
 - solidifies at approximately 40°C
 - is metabolized by many bacteria
 - facilitates obtaining pure cultures
- Endospores can be stained with
 - Safranine
 - Malachite green
 - Crystal violet
 - Methylene blue
- Fungi differs with bacteria in that it
 - contain no peptidoglycan
 - are prokaryotic
 - has nuclear membranes
 - All of these

10. A facultative anaerobic is
 a. Only grow anaerobically
 b. Only grow in the presence of O₂
 c. Anaerobe but can grow with O₂
 d. Aerobe but can grow in absence of O₂
11. Acid fast bacteria are
 a. Neisseria b. Staphylococci c. Mycobacteria d. All of these
12. Discontinuous heating is called
 a. Pasteurization b. Sterilization c. Fermentation d. Tindalisation
13. Variants for checking assay profile for antibiotics, vitamins, and amino acids are all except:
 a. Calibration b. Turbidity c. Precision d. Accuracy
14. Soyabean casein digest media is used to detect the growth of aerobic bacteria, but when incubated at and suitable for the growth of fungi.
 a. 25°C b. 26°C c. 30°C d. 37°C
15. The motile bacteria is
 a. S. typhi b. K. pneumoniae c. B. anthracis d. Shigella
16. Filter efficiency test can be performed by
 a. Leak analysis b. DOP smoke
 c. Differential pressure d. Anemometer
17. The production of acetyl methyl carbinol from pyruvic acid is checked by
 a. Indole test b. MR test c. VP test d. H₂S test
18. The ideal properties of disinfect include all except
 a. should be non-toxic and non-corrosive b. should be stable
 c. should be volatile d. should be potent
19. The microbial limit for Class 100,000 is
 a. < 3 CFU/m³ b. < 3 CFU/ft³ c. < 25 CFU/m³ d. < 25 CFU/ft³
20. In Rabbits Test for Pyrogens, the cumulative rise of body temperature should not be
 a. 3.7 °C b. 37 °C c. 1.4°C d. 2.4 °C

KATHMANDU UNIVERSITY
End Semester Examination [C]
April/May, 2023

04 APR 2023

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

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

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

SECTION "B"

[5 Q. × 3 = 15 marks]

Attempt *ANY FIVE* questions:

1. In a Microscope, Define about:
 - a. Magnification
 - b. Resolving power
2. Distinguish between controlled area and critical area in clean room.
3. State the general principle and procedure on Gram Staining for bacterial identification.
4. What are pyrogens? Mention the acceptance criteria for SHAM test.
5. What is ionizing radiation? What are the disadvantages of Radiation based sterilization?
6. Mention the advantage of Moist heat sterilization over Dry Heat sterilization.
7. Describe the characteristic features and morphology of rickettsia.

SECTION "C"

[5Q. × 5 = 25 marks]

Attempt *ANY FIVE* questions.

8. What is the principle of sterility test? State importance of positive and negative control in it? Mention the criteria for result interpretation during sterility test.
9. State the principle for microbiological assay of antibiotics. How can we conduct microbiological assay by turbidimetric method.
10. Define immunity. Explain about the immunological products used for active and passive immunization.
11. Mention the salient features of MacConkey media. Explain about IMViC test.
12. What are the precautions to be taken while using Hot air oven for sterilization?
13. Write four beneficial effects of fungi. Give the classification of fungi based on nutrition with short description for each.
14. Explain about gas sterilization. When shall we prefer to sterilize the materials using gas?

SECTION "D"

[2Q. × 7.5 = 15 marks]

Attempt *ANY TWO* questions.

15. Write the causative agent, symptoms, mode of transmission, treatment and preventive measures of Tuberculosis.
16. Define immunity. How can the immunological products be used for theranostic purpose? Give your opinion on COVID-19 vaccine.
17. How does preservative differ from antiseptic and disinfectant? Mention the procedure for the determination of MIC, MBC and Phenol coefficient.