

**B. PHARM.
THIRD SEMESTER
PHARMACEUTICAL MICROBIOLOGY
BP303T**

**SET
D**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration : 3 hrs.

Full Marks : 75

(PART-A : Objective)

Time : 30 min.

Marks : 20

Choose the correct answer from the following:

1×20=20

1. Basic principle behind sterility testing is?
 - a. Microbes will grow if they will be provided with nutrient medium, optimum temperature and pH
 - b. Presence of microbes can be detected by naked eye in any preparation
 - c. Microorganisms imparts different colors when present as contaminant in any preparation
 - d. All of the above
2. The process of moist heat sterilization under pressure is called as:
 - a. Bio-floc
 - b. Autoclaving
 - c. Heating
 - d. None of the above
3. The cultivation of viruses can be done in:
 - a. Laboratory animals
 - b. Embryonated eggs
 - c. Both a and b
 - d. None of the above
4. Which of the following can be a source of contamination?
 - a. Atmosphere
 - b. Operator
 - c. Raw Material
 - d. All of the above
5. Disinfectants are generally _____ in nature.
 - a. Bactericidal
 - b. Bacteriostatic
 - c. Both a and b
 - d. None of the above
6. Kelsey-Sykes test is a _____ challenge test.
 - a. Single
 - b. Double
 - c. Triple
 - d. None of these
7. The Basic difference between prokaryotic cells and eukaryotic cell is?
 - a. Prokaryotic cells have clear nucleus
 - b. Eukaryotic cells have distinct nucleus
 - c. Cytoplasm is absent in prokaryotes
 - d. Presence of mitochondria in prokaryotes
8. The assessment of viable microorganisms in non-sterile products is done using:
 - a. Minimum inhibitory concentration
 - b. Microbial limit tests
 - c. Autoclaving
 - d. None of the above
9. Microbiological assay can be performed for determination of:
 - a. Antibiotics
 - b. Vitamins
 - c. Amino acids
 - d. All of the above

10. MIC is expressed in terms of:
- µg/mL
 - Units/mL
 - Both a and b
 - None of these
11. The group of viruses which infect the bacteria is called as _____.
- Macrophages
 - B-cells
 - Bacteriophage
 - None of the above
12. The branch which deals with the study of fungi is called as _____.
- Oncology
 - Virology
 - Bacteriology
 - Mycology
13. Which of the following method is used for sterilization?
- Incubation
 - Microbial inoculation
 - Staining
 - Moist heat method
14. What is the function of Plasma Membrane?
- Contains genetic material of the cell
 - Provides selective permeability for certain substances
 - Provides rigidity to the cell
 - None of the above
15. Fungi is a group of _____.
- Prokaryotic organisms
 - Eukaryotic organisms
 - Marine organisms
 - None of the above
16. We can estimate the pyrogens using:
- LAL Test
 - Microbial limit test
 - Visual test
 - None of the above.
17. What is Microbiology?
- Study of microscope
 - Study of organisms that are not visible to naked eyes
 - Study of molecules that are visible to human eyes
 - All of the above
18. The photosynthesis performing microorganism is...
- Cyanobacteria
 - Protozoa
 - Fungi
 - Virus
19. Glasswares can be sterilized by....
- Hot Air Oven
 - Incineration
 - Both 'a' and 'b'
 - None of the above
20. The Father of Microbiology is...
- Antonie van Leeuwenhoek
 - Robert Koch
 - Both 'a' and 'b'
 - None of the above

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PART-B : Descriptive

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Write a short note on sterilization by radiation. 5
2. Write a note on gram staining technique. 5
3. Write the classification of microorganisms. 5
4. Explain the various factors affecting the action of disinfectants. 5
5. Explain the various methods for sterility testing of products. 5
6. Write in details about the MIC method used for evaluation of a new antibiotic. 5
7. Explain the steps for replication of viruses. 5
8. Write a detailed note on sources and types of microbial contamination. 5
9. What are the different types of spoilage? Explain. 5

(PART-C : Long type questions)

[Answer any two (2) questions]

1. Write a detailed note on the various mechanical methods of sterilization. 10

2. Write in details about any two of the following methods used for evaluation of disinfectants: 5+5=10
 - a. Tube-dilution and agar-plate method
 - b. Cup-plate method
 - c. Phenol-coefficient method
 - d. Kelsey-Sykes test

3. What is microbiological assay? Explain the various methods used for performing microbiological assay. 2+8=10

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