

**B. PHARM.
THIRD SEMESTER
PHARMACEUTICAL MICROBIOLOGY
BP303T [REPEAT]
[USE OMR FOR OBJECTIVE PART]**

**SET
A**

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

Marks : 20

1×20=20

Choose the correct answer from the following:

PART-A: Objective

1. The IMViC tests consist of the following:
 - a. Indole, methyl red, casein & Voges-Proskauer
 - b. Indole, gelatin, casein & Voges-Proskauer
 - c. Indole, methyl red, Voges-Proskauer & citrate
 - d. Indole, starch, gelatin & Voges-Proskauer
2. Which statement is true about capsomers?
 - a. They are individual units of the capsid
 - b. They are viral proteins for replication
 - c. They are units of nucleic acid viruses
 - d. All of the above
3. Efficiency of HEPA filter is
 - a. 98.97
 - b. 90.97
 - c. 99.97
 - d. 88.87
4. A preservative is an antimicrobial substance that should
 - a. Not cause irritation
 - b. Be non-toxic
 - c. Stable
 - d. All of the above
5. Physico-chemical spoilage includes
 - a. Viable growth
 - b. Change in color of the formulation
 - c. Gas production
 - d. All
6. If D value is less, the sterilization method is
 - a. Less effective
 - b. More effective
 - c. No effect
 - d. None of the above
7. The type of clean area as per WHO
 - a. Grade A, B, C & D
 - b. Grade A, B, E & D
 - c. Grade A, F, C & D
 - d. Grade A, Z, C & D
8. The term 'fungi' was coined by
 - a. Louis Pasteur
 - b. Robert Koch
 - c. Gaspard Bauhin
 - d. Jean Bauhin
9. _____ is known as the father of Microbiology
 - a. Richard Petri
 - b. Ferdinand Cohn
 - c. Robert Koch
 - d. Anton-van-Leuwenhoek

10. Method in which a test chemical is rated for its microbicidal property with reference to phenol under identical conditions is
 - a. Phenol ratio method
 - b. Phenol coefficient method
 - c. Phenol gradient method
 - d. Phenol dilution method
11. Acid fast staining is also known as
 - a. Negative staining
 - b. AFB staining
 - c. Ziehl-Neelsen staining
 - d. Both B & C
12. Hot air oven is an example of
 - a. Moist heat
 - b. Dry heat
 - c. Both a & b
 - d. None of the above
13. Which of the following is used in electron microscope
 - a. Electron beams
 - b. Magnetic field
 - c. Light beams
 - d. Electron beams & Magnetic field
14. One of the major causes for food spoilage are
 - a. Lack of oxygen
 - b. Reaction with carbon dioxide
 - c. Stored at a very low temperature
 - d. Gain and loss of moisture
15. Which of the following are true about peplomers
 - a. It is an individual unit of capsids
 - b. It is a spike-like projection on the enveloped viruses
 - c. It is a projection on the viral membrane
 - d. It is a spike-like projection on the capsids
16. Tube assay method is also known as
 - a. Glass assay method
 - b. Turbidity method
 - c. Both a & b
 - d. None of the above
17. Identify the wrong statement regarding construction of aseptic area
 - a. Double sided doors with interlock
 - b. Smooth easily cleanable floors
 - c. Lights fitted in the ceiling
 - d. Many open windows for good ventilation
18. Exponential phase is also known as
 - a. Stationary Phase
 - b. Log Phase
 - c. Lag Phase
 - d. Decline phase
19. Viruses can be cultivated in
 - a. Lab media
 - b. Living Cells
 - c. Broth
 - d. None of the above
20. HEPA stands for
 - a. High Efficiency Particulate Air
 - b. High Effective Particular Air
 - c. Hypo Effective Particulate Air
 - d. None of the above

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(PART-B: Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

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| 1. Describe the factors influencing the effectiveness of disinfectants. | 5 |
| 2. Define microbial contamination and explain its sources in pharmaceutical products. | 1+4=5 |
| 3. What is microbial growth curve? Explain its different phases in bacterial growth. | 1+4=5 |
| 4. Explain the Gram's staining technique and its significance in bacterial identification. | 5 |
| 5. Discuss the design considerations for aseptic areas. | 5 |
| 6. What is the IMViC test? Write a note on any two tests. | 1+4=5 |
| 7. Classify fungi based on spore formation and describe each type with examples. | 5 |
| 8. Write a note on the evaluation of efficiency of sterilization methods. | 5 |
| 9. List and describe the raw materials used for culture media preparation. | 5 |

PART-C : Long type questions

[Answer any two (2) questions]

1. Write a note on the reproduction/replication of viruses. 10
2. Enlist the different types of sterilization methods used in both Physical and Chemical sterilization. Explain any two physical and two chemical method of sterilization. 2+8=10
3. Write a note on **any two** microscopes used in the microbiology lab with well labelled diagrams. 5+5=10

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