

End Semester / Reappear (Semester III) Examination Dec 2022

Programme: B. Pharm
Course: Pharmaceutical Microbiology
Course Code: BP303T
Enrolment no. _____

Full Marks: 75
Time: 3 Hrs.

Section I

- 1. Objective type questions. Answer all questions. 20x1=20**
- Which of the following pioneers of Microbiology is credited with the discovery of microorganisms using high-quality magnifying lenses (early microscopes)?
(a) Anton Van Leeuwenhoek (b) Louis Pasteur (c) Robert Hooke (d) Robert Koch
 - The image obtained in a compound microscope is
(a) Real (b) Virtual (c) Real inverted (d) Virtual inverted
 - Which of the following cell organelles is called the powerhouse of the cell?
(a) Nucleus (b) Lysosomes (c) Mitochondria (d) Chloroplast
 - Flagella in bacteria enable them to
(a) Reproduce (b) Adhere to tissue surfaces (c) Thrive in nutrient agar (d) Locomote
 - In pour-plate method, the medium should be maintained at what temperature?
(a) 45 degree C (b) 67 degree C (c) 37 degree C (d) 0 degree C
 - Resolving power of light microscope is
(a) 2 mm (b) 0.2 mm (c) 0.1 mm (d) 1 mm
 - Which component of the compound microscope aids in the collecting and focussing of light rays on the material to be examined?
(a) Lens for the eyepiece (c) A lens with a condenser
(b) A lens that is objective (d) The use of a magnifying lens
 - The pressure inside autoclave to reach a temperature of 121°C is
(a) 5 lb/in² above atmospheric pressure (c) 20 lb/in² above atmospheric pressure
(b) 10 lb/in² above atmospheric pressure (d) 15 lb/in² above atmospheric pressure
 - Percentage of aqueous solution of formaldehyde gas in formalin is?
(a) 37% (b) 25% (c) 10% (d) 53%
 - The test animal used for pyrogen testing is
(a) Rat (b) Rabbit (c) Mice (d) Guinea pig
 - Aflatoxins is produced by
(a) Bacteria (b) Virus (c) Fungi (d) Nematode
 - The temperature range for pasteurization is
(a) 60 °C-70 °C (b) 121 °C-130 °C (c) 65 °C-75 °C (d) 62 °C-72 °C
 - A class 100 cleanroom has
(a) 100 particles per cubic metre (c) 100 particles per squarefoot
(b) 100 particles per cubic foot (d) 100 particles per square metre

- xiv. The solidifying agent commonly used in preparation of media is
 (a) Glucose (b) Agar (c) Yeast extract (d) Silica gel
- xv. The test organism used in the microbial assay of Niacin is
 (a) *L.leichamannii* (b) *L.casei* (c) *L.plantarum* (d) *L.viridescens*
- xvi. Thermolabile substances may be sterilized by
 (a) Moist heat sterilization (c) Filtration sterilization
 (b) Dry heat sterilization (d) None of these
- xvii. Unit of Minimum Inhibitory Concentration (MIC) is
 (a) mg/L (b) mg/ml (c) kg/L (d) ng/ml
- xviii. Preservative used in eye drop is
 (a) Chlorocresol (b) Benzalkonium Chloride (c) Methyl paraben (d) Propyl paraben
- xix. Enzyme responsible for alcoholic fermentation is
 (a) Ketolase (b) Peroxidase (c) Zymase (d) Oxidase
- xx. HEPA is
 (a) High Efficiency Pressure Air (c) High Efficiency Pure Air
 (b) High Efficiency Particle Air (d) High Efficiency Particulate Air

Section II

2. Short Answer type questions. Answer any five.

5x7=35

- a. Write note on evaluation of microbial stability of formulations.
- b. Write a note on factors affecting disinfection.
- c. Give a brief idea on importance of fungi in present era.
- d. Write a note on Acid-fast staining.
- e. What is microscopy? Give its type.
- f. Discuss the gaseous sterilization.
- g. Discuss the aseptic area, structural design and sources of contamination

Section III

Long Answer type questions. Answer any two.

2x10= 20

3. Write a descriptive note on cultural media.
4. Enumerate the difference between simple staining and differential staining. Give a detailed account of Gram's staining technique.
5. Explain any four methods for the evaluation for Bacteriostatic and Bactericidal actions.
