

(3 Hours)

Total Marks: 75

- N.B.:**
- 1. All questions are compulsory**
  - 2. Draw diagram wherever necessary**
  - 3. Figure to the right indicate full marks**

**1 Multiple Choice Questions (Answer all the 20 questions) 20**

- 1 Slant culture is prepared using .....
  - a. Solidified media
  - b. Liquid media
  - c. Semisolid media
  - d. Liquid crystalline media
- 2 The function of condenser in microscope is.....
  - a. Gathering light
  - b. Hold specimen
  - c. Adjust distance
  - d. Magnify object
- 3 ..... is a method of bacteriological count
  - a. Lyophilisation
  - b. Roll tube method
  - c. Cup plate method
  - d. Neubauer chamber
- 4 Anaerobic bacteria can be isolated with
  - a. Streak plate method
  - b. Roll tube method
  - c. Pour plate method
  - d. Spread plate method
- 5 Secondary metabolites are obtained at the end of .....
  - a. Lag phase
  - b. Exponential phase
  - c. Stationary phase
  - d. Decline phase
- 6 ..... is used as a technique for preservation of bacteria
  - a. Lyophilisation
  - b. Staining
  - c. Gas pack system
  - d. Fermentation
- 7 Simple staining technique can be used to determine
  - a. Reproductive cycle of cells
  - b. Presence of Peptidoglycan
  - c. Arrangement of bacterial cells only
  - d. Different types of bacterial cells

- 8 Gram staining was developed by
- German bacteriologist
  - Danish bacteriologist
  - Russian bacteriologist
  - American bacteriologist
- 9 ..... is used to prevent infection by killing or inhibiting pathogen
- sterilant
  - disinfectant
  - adsorbent
  - antiseptic
- 10 ..... is used for sterilization of microbiological media?
- Red heat
  - Membrane filtration
  - Chemical method
  - Autoclave
- 11 Which of the following process does not kill bacteria?
- Hot air sterilization
  - Filtration
  - Autoclave
  - Incineration
- 12 Bioburden is \_\_\_\_\_ number of microorganism present in a product or area
- Initial
  - Final
  - During process
  - After the process
- 13 Sterilization is?
- Process of growing microbes in the laboratory
  - Process for the preparation of antibiotics
  - Killing or removing all the microorganisms
  - Estimation of potency
- 14 Fungi .....
- are photosynthetic
  - are prokaryotic cells
  - have cell walls of peptidoglycan
  - secrete extracellular enzymes
- 15 Viruses require \_\_\_\_\_ for growth.
- bacteria
  - plants
  - animals
  - living cells

- 16 Alcohol act as a disinfectant by \_\_\_\_\_
- Producing toxins
  - Protein denaturation
  - Membrane lysis
  - Coagulation
- 17 \_\_\_\_\_ is a test for evaluation of disinfectant
- Antimicrobial assay
  - Test for sterility
  - Phenol coefficient method
  - IMViC
- 18 \_\_\_\_\_ is used in Test for sterility
- Alternate thioglycollate medium
  - SDA medium
  - Nutrient agar
  - Nutrient broth
- 19 Cup plate method is used for .....
- Antibiotics
  - Vitamins
  - Amino acids
  - Proteins
- 20 Microbiological assay of antibiotics can be performed by
- Cup plate method
  - Ridel Walker Test
  - Phenol coefficient method
  - Agar plate method

**2 Answer the following (any 2 out of 3) 20**

- Classify methods of sterilisation & explain dry heat as a method of sterilisation in detail
- Explain lytic and lysogenic cycle in detail
- Write a note on Morphology, structure and nutrition of Fungi

**3 Answer the following (any 7 out of 9) 35**

- Explain principle of Gram staining and differentiate between Gram positive and Gram negative bacteria.
- Explain factors affecting action of disinfectants
- Write a note on motility of bacteria
- Explain filtration sterilisation in detail
- Write a note on methods of isolation of bacteria
- Write a note on phenol coefficient method
- Write a note on microbiological assay of antibiotics by cup plate method
- Write a note on sterilisation indicators
- Explain spore formation in bacteria.