

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Describe the historical development in the field of microbiology in detail.
- Q.24 Explain growth curve in detail.
- Q.25 Explain the types of microorganism in detail.

No. of Printed Pages : 4

Roll No.

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1st Sem. / Food Technology

Subject : Basic Microbiology

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Who is known as the father of Microbiology?
- a) Edwin John Butler
 - b) Ferdinand Cohn
 - c) Robert Koch
 - d) Antoni van Leeuwenhoek
- Q.2 Which of the following is used in electron microscope?
- a) Electron beams and magnetic fields
 - b) light waves
 - c) magnetic fields
 - d) electron beams
- Q.3 The respiratory chain of bacteria is associated with the _____
- a) cytoplasmic membrane
 - b) cell wall
 - c) cytoplasm
 - d) mitochondrial membrane

- Q.4 Growth of bacteria or microorganisms refer to _____
- changes in the total population
 - an increase in number of cells
 - an increase in the size of an individual organism
 - an increase in the mass of an individual organism
- Q.5 Which of the following method can be used to determine the number of bacteria quantitatively?
- Spread-plate
 - Streak-plate
 - Pour-plate and spread plate
 - Pour plate
- Q.6 What are the cell wall structural components of fungi?
- peptidoglycan
 - cellulose
 - chitin
 - chitin, cellulose or hemicellulose

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 A _____ is an instrument that magnifies objects otherwise too small to be seen, producing an image in which the object appears larger.
- Q.8 Bacteria are classified based on their shape. (True/False)
- Q.9 Write full form of HTST.

(2)

221115

- Q.10 _____ is a series of sequential dilutions that are performed to convert a dense solution into a more usable concentration.
- Q.11 Write two examples of macro nutrients needed for microbial growth.
- Q.12 Psychrophiles can grow in the range of _____ temperature.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 What is staining and what are its purposes?
- Q.14 What is radiation?
- Q.15 Differentiate between sterilization and pasteurization.
- Q.16 Draw neat and clean diagram of microscope and explain its parts.
- Q.17 Define cell. Enlist various cell organelles.
- Q.18 Define spread plating.
- Q.19 Differentiate between simple and differential staining.
- Q.20 Define growth curve. Draw the bacterial growth curve showing all phases.
- Q.21 Explain the structure of fungi and its different parts.
- Q.22 Differentiate between gram positive and gram negative bacteria.

(3)

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