



PPD-1659

Seat No. _____

B. Sc. (Sem. II) Examination

April / May - 2016

Microbiology : Paper - MB - 02

(Compulsory) (Fundamentals of Bacteriology)

Time : 3 Hours]

[Total Marks : 70

PART - A

Attempt any five :

10

- 1 _____ is composed of Home or Hetero polysaccharide.
(A) Cell wall
(B) Capsule
(C) Spore
(D) Flagella
- 2 _____ is gram positive cocci.
(A) Escherichia coli
(B) Bacillus cereus
(C) Staphylococcus aureus
(D) Pseudomonas aeruginosa
- 3 _____ use light as source of energy and H_2S are e^- donor.
(A) Photo-lithotrophs
(B) Photo-organotrophs
(C) Chemo-lithotrophs
(D) Chemo-organotrophs
- 4 Some bacteria can grow only on living cell or host, they are
(A) Fastidious bacteria
(B) Obligate parasites
(C) Strict anaerobes
(D) Mixotrophs

- 5 Drinking water is purified by derivatives of _____.
(A) Chlorine
(B) Iodine
(C) Heavy metal
(D) Alcohols
- 6 Sterilization of heat sensitive-biological fluids can be achieved by
(A) Ultra sonication
(B) Membrane filtration
(C) Steam sterilization
(D) Osmotic pressure
- 7 In taxonomy, a group of similar species is called _____.
(A) Class
(B) Order
(C) Genus
(D) Family

PART - B

Give the answers in short : (any five) 10

- 1 Define : Plasmolysis
- 2 Enlist various patterns of flagellar arrangement in bacteria.
- 3 Define: Chemically defined media.
- 4 Name the volumes of Bergay's manual of systematic bacteriology.
- 5 Classes of bacteria based on Temperature requirement.
- 6 Mention two characteristics of pili (pilus)
- 7 Mention two applications of filtration method.

PART - C

Give the answers in brief : (any four) 16

- 1 Functions of cell wall and cell membrane of bacteria.
- 2 Applications of Dyes and Detergents as antimicrobial agent.
- 3 Structure and function of bacteria spore.
- 4 Various modes of cell division in bacteria.
- 5 Nutritional diversity of bacteria.

PART - D

Write short notes on : (any four) 16

- 1 Cell wall of Gram negative bacteria
- 2 Characteristics of an ideal antimicrobial chemical agent
- 3 Bacteriological filters and membrane filters
- 4 Function and composition of capsule.
- 5 Define : Type strain, Protoplast, Cysts, Binary fission.

PART - E

Give the answers in detail : (any three) 18

- 1 Various methods of classifying bacteria.
 - 2 Size, shapes and arrangement of bacteria.
 - 3 Nutritional classification of bacteria.
 - 4 Types of bacteriological media.
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