

207

**B. Sc. (Part I) EXAMINATION, 2017**  
**MICROBIOLOGY**

Paper First

(Fundamentals of Microbiology)

Time : Three Hours

Maximum Marks : 50

Note : Attempt all Sections.

Section—A

1 each

(Objective Type Questions)

1. Give most suitable answer to the following :

(i) Streptomycin is known as :

- (a) Antibiotic
- (b) Fumigant
- (c) Vitamin
- (d) Hormone

(ii) *Bacillus subtilis* bacterium is a :

- (a) Gram-negative
- (b) Gram-positive
- (c) Gram-neutral
- (d) Gram-negative and positive

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A-29

271

[ 2 ]

- (iii) Mesosome is found in :
- (a) Algae
  - (b) Fungi
  - (c) Bacteria
  - (d) Virus
- (iv) Disinfection is a :
- (a) Chloropicrin
  - (b) Calcium hypochlorite
  - (c) Carbon disulphide
  - (d) Chlorobromopropene
- (v) Actinomycetes is known as :
- (a) *Diplococcus* sp.
  - (b) *Salmonella* sp.
  - (c) *Streptomyces* sp.
  - (d) *Xanthomonas* sp.

2. Fill in the blanks : 1 each
- (i) Bacterial flagella consist of a pure protein called .....
  - (ii) Some cyanobacteria live in symbiotic association with protozoans are called .....
  - (iii) Full form of HIV is .....
  - (iv) A ..... culture consists of a population of only one species of microorganism and all derived from a single parent.
  - (v) Blue green algae is also known as .....

## Section—B

2 each

## (Short Answer Type Questions)

Note : Attempt all questions.

3. Write in short about the future of microbiology.
4. Write the principle of autoclaving.
5. Explain the fumigation with examples.
6. Write the staining method of spores.
7. Draw a labelled diagram of a bacterial cell as seen under electron microscope.

## Section—C

10 each

## (Long Answer Type Questions)

Note : Attempt any *three* of the following.

8. Explain the principle of apparatus and application of electrophoresis.
9. What is Microbiology ? Explain the detail about the industrial microbial products.
10. Explain the types of culture media used to grow bacteria and identify bacteria with the help of Gram's stain.
11. What is Sterilization ? Explain various methods of sterilization.

207

150

A-29

273