

**FIRST SEMESTER B.Sc. DEGREE (SUPPLEMENTARY/IMPROVEMENT)
EXAMINATION, NOVEMBER 2014**

(UG-CCSS)

Core Course—Microbiology

MB 1B 01—GENERAL MICROBIOLOGY

Time : Three Hours

Maximum : 30 **Weightage**

Section A

I. Answer all *twelve* questions. Each question carries $\frac{1}{4}$ **weightage** :

1 Acid fast staining is used to stain :

- | | |
|-----------------------------|---------------------------|
| (a) Corynebacterium. | (b) E.coli. |
| (c) Mycoplasma. | (d) Actinomycetes. |

2 Which among is a neutral dye :

- | | |
|-------------------------------------|---------------------|
| (a) Eosinate methylene blue. | (b) Crystal violet. |
| (c) Malachite green. | (d) Fulgen. |

3 Who developed aseptic technique :

- | | |
|--------------------|--------------------|
| (a) Robert Koch. | (b) Jenner. |
| (c) Louis Pasteur. | (d) Paul Ehrlich. |

4 Which among is a **spirocheate** :

- | | |
|-----------------------------|------------------------|
| (a) <i>Bacillus cereus.</i> | (b) Borrelia. |
| (c) Caryophanon. | (d) Saprospira. |

5 What is temporal gradient ?

6 What is **tyndalization** ?

7 Give two examples for transport media.

8 Write any two antiviral drugs.

9 The protein present **inflagellar** filament is _____

10 The aerobic organism produce _____ enzyme to eliminate superoxide radicals.

11 A single isolation of pure culture is known as _____

12 The antimicrobial agents used to treat infections are called _____

(12 x $\frac{1}{4}$ = 3 **weightage**)

Turn over

Section B

II. Answer *all* nine questions. Very briefly :

- 13 Phenolic compounds.
- 14 Negative staining.
- 15 Cold sterilization.
- 16 Selective-differential media.
- 17 **Actinomycetes**.
- 18 **Pleomorphic** bacteria.
- 19 **HEPA** filter.
- 20 Goose neck experiment.
- 21 Inclusion bodies.

(9 x 1 = 9 weightage)

Section C

III. Answer any *five* questions :

- 22 Structure of **Bacteriophages**.
- 23 "Is nutrient media" is a universal media ? Explain.
- 24 Sterilization by radiation.
- 25 Methods to evaluate potency of antimicrobial agents.
- 26 Explain the principle and function of electron microscope.
- 27 Discuss about antiviral and antitumor chemotherapeutic agents.
- 28 Explain the structure and function of bacterial cell membrane.

(5 x 2 = 10 weightage)

Section D

IV. Answer any *two* questions in detail :

- 29 With neat diagram, explain the structure of a bacterial cell.
- 30 Discuss about various staining methods employed in Microbiology to study the structure and morphology of Bacteria.
- 31 Discuss about different Microscopes their mode of working and specific uses.

(2 x 4 = 8 weightage)