

Seat No. : \_\_\_\_\_

**XR-119**

**April-2013**

**B.Sc. Sem. II (CBCS)**

**MICROBIOLOGY**

**MI-103, Basic Bacteriology**

**Time : 3 Hours]**

**[Max. Marks : 70**

- Instructions:** (1) Draw figures wherever necessary.  
(2) Right side indicate marks.

1. Answer the following : (any **two**) **14**
- (a) Describe chemical composition and functions of Gram positive bacterial cell wall.
  - (b) Discuss chemical nature and functions of bacterial capsule.
  - (c) Describe formation of bacterial endospore and its significance.
  - (d) Discuss different arrangements and functions of bacterial flagella.
2. Write as required : (any **two**) **14**
- (a) Describe the important ingredients used for the preparation of culture media.
  - (b) Discuss the physical conditions required for the growth of bacteria.
  - (c) Describe the types of bacterial growth observed in broth and on solid media.
  - (d) Enlist types of culture media, discuss any one culture medium.
3. Describe the following : (any **two**) **14**
- (a) General principles of microbial control.
  - (b) Use of moist heat for microbial control.
  - (c) Any one filtration process to control microorganisms.
  - (d) Use of gaseous agents for microbial control.

4. Write an account for the following : (any **two**) **14**
- (a) Features of binomial system of nomenclature.
  - (b) Three domain classification system of scientist 'Carl Woese'.
  - (c) Contribution of scientist 'R.H. Whittaker' in classification.
  - (d) Bergy's manual of systematic bacteriology.
5. Write briefly in **one** or **two** lines on the following : **14**
- (1) Bacteriostatic compounds
  - (2) Organotrophs
  - (3) Bactericidal compounds
  - (4) Lithotrophs
  - (5) Example of any one carbon source in culture media.
  - (6) Draw figure of monotrichous flagellation.
  - (7) Name any one capsulated bacterial species.
  - (8) Characteristics of bacterial endospore. (any one)
  - (9) Who gave binomial nomenclature system ?
  - (10) What is Chemo taxis ?
  - (11) Give example of any one antimicrobial radiation.
  - (12) Define kingdom protista.
  - (13) What is a selective medium ?
  - (14) Give example of chemical antimicrobial agent.
-