

May - 2014

B. Sc. Sem. - IV

MI-204 : MICROBIOLOGY (MICROBIAL BIODIVERSITY)

Time : 3 Hours]

[Max. Marks : 70

Instructions : (1) Right side indicate marks.

(2) Draw figures, wherever necessary.

1. Answer the following questions : (any two) 14

- (a) Write a brief account of diversity amongst microorganisms.
- (b) Describe the events responsible for origin of life and further leading to development of biodiversity.
- (c) Discuss the concept of species for Prokaryotic microorganisms.
- (d) Write a note on association of microorganisms, related with human welfare.

2. Write as required : (any two) 14

- (a) Enlist different types of microscopy, discuss any one microscopy with its applications in assessment.
- (b) Describe different cultural characteristics studied for identification of bacteria.
- (c) Write a note on any one genetic method, used for the identification of bacteria.
- (d) Discuss the important parameters essential for the preparation of cultural media.

3. Answer the following : (any two) 14

- (a) Discuss various morphological characteristics of bacteria, that helps in identification of their biodiversity.
- (b) Write a brief account for nutritional types of bacteria.
- (c) What are Archaeobacteria ? Discuss groups of Archaeobacteria.
- (d) Describe the significance of spore in the study of Biodiversity.

4. Explain the following : (any two)

14

- (a) Morphological characteristic of Fungi.
- (b) Ecological significance of Algae.
- (c) Distinguish Characteristics of Protozoa.
- (d) Viruses are link between living and non-living entities.

5. Write briefly in one or two lines :

14

- (1) What is phylogenetic relationship ?
- (2) Mention three major branches of evolutionary tree.
- (3) What are Organelles ?
- (4) What is percentage G + C ?
- (5) Name two fluorescent dyes.
- (6) Name types of Electron Microscopes.
- (7) What is Axenic Culture ?
- (8) Name one thermophilic bacteria.
- (9) What are obligate parasites ?
- (10) Define : Prions.
- (11) Write one distinguishing character of algae.
- (12) What are Lichens ?
- (13) Define Ecological Niche.
- (14) Name types of Mycorrhiza.