PO-410 Seat No. _____

B. Sc. (Sem. IV) Examination

April / May – 2016

MI - 204 : Microbiology

(CC - Microbial Diversity)

Time : 3 Hours] [Total Marks : **70**

PART - A

Answer any **five** Multiple Choice Questions from the following : **10**

1 Malaria caused by
(A) Bacteria (B) Virus
(C) Protozoa (D) Fungi

2 Viroids are _____
(A) SS DNA (B) DS RNA
(C) SS RNA (D) DS DNA

3 Biodiversity term coined by _____
(A) Robert Whittaker (B) Harvey B. Lilly
(C) Bergey (D) Walter G. Rosen

4 Bacteria which oxidize inorganic chemicals are
(A) Heterotrophs (B) Chemolithotrophs
(C) Both (A) and (D) (D) Chemoorganotrophs

5 The study of _____ is called mycology.
(A) algae (B) protozoa
(C) fungi (D) virus

6 CLM stands for
(A) Confocal Light Microscope
(B) Confocal Laser Microscope
(C) Combined Laser Microscope
(D) Combined Light Microscope

7 The type of diversity including all the different kinds of living things found in a certain habitat is called as
(A) Species diversity
(B) Genetic diversity
(C) Ecosystem diversity
(D) Population diversity

PART- B

Give very short answers on any **five** of the following : **10**

1 Define : Ecosystem Biodiversity.

2 Define Lichens with example.

3 Give full name: RFLP, PCR.

4 Enlist cultural methods of biodiversity assessment.

5 Enlist methods for cultivation of virus.

6 Give the examples of beneficial algae.

7 Define : Heterotrophs and phototrophs.

PART - C

Give answers on any **four** questions in brief : **16**

1 Explain : Write note on Prions.

2 Write a note on Diversity in ultra-structure of cell.

3 Explain : Write note on Electron microscopy.

4 Explain : Species Concept.

5 Write note on PCR in detail.

6 General properties Algae and Fungi.

PART - D

Give answers on any **four** questions in brief : **16**

1 Economic Importance of Protozoa.

2 Objectives for microscopic analysis in microbial diversity assessment.

3 Write note on Heterotrophic metabolism.

4 Write note on Virus.

5 Write note on the role of mol % G+C in assessment of biodiversity.

6 Discuss the origin of life.

PART - E

Write short notes/answers on any **three** of the following : 18

1 Archaeal diversity.

2 Discuss briefly role of lipid biomarkers and protein profiling in biodiversity assessment.

3 Selective, differential and enrichment culture techniques as a tool for studying microbial diversity.

4 Detail note on value of biodiversity.
