

2012

M. Sc. (Biotechnology) First Semester
MBIO-103: Microbial Diversity and Metabolism

Time allowed: 3 Hours

Max. Marks: 80

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Write short answers:-

- a) Pure culture
- b) Chemoautotrophs
- c) Synchronous growth
- d) Chemolithotrophy
- e) Slime molds
- f) Prions
- g) Viriod
- h) Exotoxin and endotoxin

(8x2)

UNIT - I

II. a) Discuss the contribution of Robert Koch in microbiology.

b) What is sterilization? Discuss various methods with examples.

(4,12)

III. Write short note on:-

- a) Formulation of culture media
- b) Ribosomal RNA sequencing
- c) Isolation of photosynthetic microbes

(5,5,6)

UNIT - II

IV. a) Define microbial growth? Give various methods for measurement of growth.

b) Discuss two methods for preservation of microorganisms.

(10,6)

V. Write short note on:-

- a) Halophiles
- b) Purple and green bacteria
- c) Mycoplasma

(5,6,5)

P.T.O.

(2)

UNIT - III

- VI. a) Explain Gram positive and gram negative bacterial cell wall.
b) Explain endospore and its significance. (10.6)
- VII. a) Describe with flow chart the pathway of cell wall synthesis in bacteria.
b) Write a note on lysogenic cycle and its significance. (9.7)

UNIT - IV

- VIII. Write short note on following:-
a) Microflora of oral cavity
b) Methods of entry of microbes in host (6.10)
- IX. Write short note on:-
a) Sulfa-drugs
b) Broad spectrum Antibiotics (8.8)

x-x-x