

[This question paper contains 4 printed pages.]

6071

Your Roll No.

B.Sc. (H) MICROBIOLOGY / Ist Sem. B

Paper – MIHT-101

(Introduction to Microbial World)

Time : 3 Hours

Maximum Marks : 75

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

Attempt Five questions in all.

All questions carry equal marks.

1. Give an example of the following (any fifteen) :

- (i) Chlamydiae
- (ii) Thermophilic archaeobacteria
- (iii) Nitrogen fixing algae
- (iv) Poisonous fungus
- (v) A plant growth hormone producing fungus
- (vi) Plant symbiotic bacteria
- (vii) Bacterial biofertilizer
- (viii) Vesicular arbuscular Mycorrhizal fungus
- (ix) Algae associated with coral reef

P.T.O.

- (x) Algae exhibiting *Palmella stage*
 - (xi) Fungus used for industrial production of citric acid
 - (xii) Viroidal disease
 - (xiii) Dermatophyte
 - (xiv) Prokaryotic algae
 - (xv) Fungus producing zygospore
 - (xvi) An algae showing false branching
 - (xvii) Halophilic algae (1×15)
2. (a) Discuss the germ theory of disease? Who proposed it? (5)
- (b) Who is the father of antiseptic surgery? Justify your answer. (4)
- (c) Name any two scientists who contributed to the development of environmental Microbiology and discuss their work? (6)
3. Differentiate between (any five) :
- (a) Prokaryotic and eukaryotic cell
 - (b) Viroid and Prion
 - (c) Sexual and parsexual cycle

(d) Monoecious and dioecious thallus

(e) Zygosporangium and oospore

(f) Haplobiontic and diplobiontic life cycle (3×5)

4. (a) Write short notes (any 3) :

(i) Food reserve in algae

(ii) Heterokaryosis

(iii) Types of Asexual spores in algae

(iv) One step multiplication curve (4×3=12)

(b) Discuss the mode of nutrition in Protozoa ? (3)

5. (a) Outline the classification proposed by Whittaker.
What is the basis for Whittaker's classification ?

(4)

(b) Write an explanatory note on lysogenic cycle of bacteriophages ?

(5)

(c) Which microorganisms are placed under acellular microorganisms and why ?

(4)

(d) Name the different types of symmetry found in viral capsids ?

(2)

6. (a) Who discovered vaccination ? Write briefly about the disease and the process of vaccination used ?

(4)

P.T.O.

- (b) Describe the work of Louis Pasteur on fermentation studies. (3)
- (c) Who discovered penicillin and how? (3)
- (d) Write briefly about the contributions of Elie Metchnikoff to the field of microbiology. (3)
- (e) Describe the contributions of Fritsch to the field of phycology? (2)