

This question paper contains 3 printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : 5754

Unique Paper Code : 2532011101

Name of the Paper : Introduction to the Microbial World

Name of the Course : B.Sc. (H) Microbiology

Semester : I

Duration : 3 Hours

Maximum Marks : 90

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

Attempt any five questions.

Attempt all parts of a question together.

All questions carry equal marks.

1. Define the following (any nine) : 2×9=18
Bacteriophage, Superbug, Cyst, Holocarpic fungi, Mushroom, Carbon sequestration, Capsid, Plaque, Dimorphic fungi, Psêudomycelium.
2. (a) Differentiate between the following (any four) : 4×4=16
 - (i) Biofertilizers and Biopesticides
 - (ii) Lytic and Lysogenic cycle
 - (iii) Prebiotics and Probiotics
 - (iv) Fungal cell wall and Algal cell wall
 - (v) Viroids and Prions.

P.T.O.

(b) Give an example of viruses having :

2

(i) Icosahedral symmetry

(ii) ssRNA genome.

3. (a) Write short notes on (any four) :

3×4=12

(i) Human Microbiome

(ii) Space Microbiology

(iii) Algal flagella

(iv) Germ theory of diseases

(v) Bioremediation.

(b) Draw a well labelled diagram of sexual reproduction in *Rhizopus*. 4

(c) What is bioaugmentation ? 2

4. (a) Briefly explain any two evidences which disapprove the theory of spontaneous generation. 5

(b) What are vaccines ? Describe its types with examples. 5

(c) Discuss the structure of *Giardia* with the help of a well-labelled diagram. 4

(d) Name the organisms involved in production of (any four) : 4

Acetic acid, Invertase, Citric Acid, Carrageenan, Yogurt, Kefir

5. (a) Who gave 3 domain classification ? What is the basis of the classification ? 4
- (b) Discuss various modes of locomotion in protozoa. 4
- (c) What is eye spot ? Give its significance. 3
- (d) What is biogas ? Give examples of *two* producer microorganisms. 3
- (e) Differentiate between prokaryotes and eukaryotes. 4
6. (a) Write the contribution of the following scientists (any *four*) : $2 \times 4 = 8$
Paul Ehrlich, Joseph Lister, M Beijerinck, Sergei Winogradsky, Louis Pasteur
- (b) Comment upon the following (any *four*) : $2.5 \times 4 = 10$
Phage therapy, Bioleaching, Rhizomorph, Dolipore Septum, Algal Blooms