



PMM/KS/15-5747

First Semester B. Sc. Examination

MICROBIOLOGY

Paper – II

(Microbial Diversity)

Time : Three Hours]

[Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. (a) Give major characteristics of cyanobacteria. Discuss positive impacts of cyanobacteria on humans and environment. 5
- (b) What are archaebacteria ? Discuss their ecological importance. 5

OR

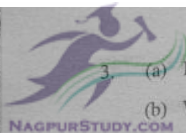
- (c) Describe salient features of mycoplasmas. 5
 - (d) Write general characteristics of actinomycetes. 5
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2. Differentiate between procaryotic cells and eucaryotic cells.

OR

Describe sexual reproduction in fungi. 10

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Contd.



3. (a) How viruses were discovered ? $2 \frac{1}{2}$
(b) Write a note on icosahedral symmetry. $2 \frac{1}{2}$
(c) Explain LHT system of virus classification. $2 \frac{1}{2}$
(d) Describe chick-embryo method for virus cultivation. $2 \frac{1}{2}$

OR

- (e) Describe adsorption and penetration phases of lytic cycle. $2 \frac{1}{2}$
(f) Diagrammatically illustrate lysogenic cycle. $2 \frac{1}{2}$
(g) Enlist the techniques to detect viral growth. Explain any one. $2 \frac{1}{2}$
(h) Draw a well labelled diagram of T_4 bacteriophage. $2 \frac{1}{2}$
4. Explain various positive microbial interactions with suitable examples. 10

OR

Explain various negative microbial interactions with suitable examples. 10

5. Solve any Ten :—

- (i) What is role of heterocyst in anabena ? 1
(ii) What are energy parasites ? 1

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- (iii) Name the scientist who discovered rickettsia. 1
- (iv) Name any two asexual fungal spores. 1
- (v) Name the insects involved in spread of trypanosomal diseases. 1
- (vi) Give any two examples of industrially important algae. 1
- (vii) What is virion ? 1
- (viii) Give any two examples of RNA viruses. 1
- (ix) Define nucleocapsid. 1
- (x) Name the host of Bdellovibrio parasite. 1
- (xi) What are ruminants ? 1
- (xii) What is bioluminescence ? 1