

Bachelor of Science (B.Sc.) Semester—I (C.B.S.) Examination
MICROBIOLOGY
(History and Microbial Morphology)
Compulsory Paper—1

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. (a) Discuss the contributions of John Tyndal.	2½
(b) Explain the work of Louis Pasteur in support of theory of biogenesis.	2½
(c) Explain Geomicrobiology.	2½
(d) Give the contributions of Winogradsky.	2½

OR

(e) Give the contributions of Robert Koch in pure culture technique.	2½
(f) Write a note on Chicken Cholera experiment.	2½
(g) Give the scope of biotechnology.	2½
(h) Give the contributions of Beijerinck.	2½

2. Describe in detail the structure of cell wall of gram negative bacteria. 10

OR

Explain fluid mosaic model of cell membrane and add a note on functions of cell membrane. 10

3. Describe in detail the structure of flagella. 10

OR

Draw a well labelled diagram of bacterial endospore and describe the process of its formation.

10

4. (a) Describe Whittakar five kingdom system. 5
(b) Describe DNA hybridization as a tool for taxonomy. 5

OR

(e) Describe numerical taxonomy. 5
(f) Explain 16S rRNA cataloguing. 5

5. Solve any **TEN** : 1×10

- (i) What is Mycology ?
- (ii) What is the contribution of Lister ?
- (iii) What is Exobiology ?
- (iv) What is Nucleoid ?
- (v) What are Mesosomes ?
- (vi) Where is Teichoic acid present in Bacteria ?
- (vii) What is Slime Layer ?
- (viii) What are Fimbriae ?
- (ix) What are Myxospores ?
- (x) What is intuitive classification ?
- (xi) What are DNA probes ?
- (xii) What is GC : AT ratio ?