

KNT/KW/16/5053

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 Whittaker 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** :

- (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 ?

1×10