

KNT/KW/16/5054

Bachelor of Science (B.Sc.) Semester—I (C.B.S.) Examination

MICROBIOLOGY

(Microbial Diversity)

Compulsory Paper—2

Time : Three Hours]

[Maximum Marks : 50

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

(2) Draw diagrams wherever necessary.

1. Discuss general characteristics of mycoplasma and rickettsia. 10

OR

Discuss salient features of archaebacteria and give economic importance of methanogenic bacteria. 10

2. Describe general characteristics of protozoa and diagrammatically explain life cycle of Trypanosoma. 10

OR

Differentiate between prokaryote cell and eukaryote cell and draw typical structure of each. 10

3. (a) Discuss icosahedral and helical symmetry of viruses. 5
(b) Explain cultivation and virus in chick embryo. 5

OR

- (e) Describe lysogeny. 5
(f) Write a note on cytopathic effect. 5
4. (a) Explain commensalism with example. 2½
(b) Differentiate between predation and parasitism with example. 2½
(c) Write a note on antagonism. 2½
(d) Explain the interaction between root nodule and protist. 2½

OR

- (e) Write a note on rumen bacteria. 2½
- (f) Explain syntrophism with example. 2½
- (g) Illustrate interaction of bdellovibrio with protist. 2½
- (h) Write a note on synergism. 2½

5. Solve any **TEN** :

- (i) What is energy parasite ? 1
- (ii) Write one importance of anabaena. 1
- (iii) What is heterocyst ? 1
- (iv) Define sporangiospore. 1
- (v) Name any two industrially important algae with their use. 1
- (vi) Give two advantages of slide culture technique for the growth of fungi. 1
- (vii) Define eclipse period. 1
- (viii) Give any two examples of viruses with complex symmetry. 1
- (ix) Name any two inclusion bodies. 1
- (x) What is bioluminescence ? 1
- (xi) What is the significance of bacteria present in midgut of termites ? 1
- (xii) Define competition as negative interaction. 1