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

**MICROBIOLOGY (Microbial Diversity)**

**Compulsory Paper—2**

Time : Three Hours] [Maximum Marks : 50

**Note :—** (1) **ALL** questions are compulsory.
(2) All questions carry equal marks.

1. (a) Describe the general characteristics of Mycoplasma. 5
   (b) Describe the general characteristics of Rickettsia. 5

**OR**

   (a) Give different characteristics of Methanogenic bacteria. 5
   (b) What are Cynobacteria ? Give their applications. 5

2. Discuss life cycle of Trypanosome. 10

**OR**

   Describe the differences between prokaryotic and eukaryotic cells along with diagramme. 10

3. Describe Lytic Cycle of $T_4$-phage. 10

**OR**

   Explain methods of Cultivation of animal viruses in detail. 10

4. Explain following in brief :
   (a) Commensalism 2½
   (b) Synergism 2½
   (c) Syntropism 2½
   (d) Mutualism 2½

**OR**

   (e) Parasitism 2½
   (f) Competition 2½
   (g) Predation 2½
   (h) Antagonism 2½

5. Solve any **TEN** questions :
   (i) Write two examples of proteobacteria.
   (ii) Write two examples of Chlamydia.
   (iii) Give any one use of streptomyces.
   (iv) Give one example of industrially important algae.
   (v) Give any two characters of protozoa.
   (vi) Write one advantage of Slide culture technique.
   (vii) Give an example of virus with icosahedral symmetry.
   (viii) Define Lysogeny.
   (ix) Name any two DNA viruses.
   (x) What is luminescent bacteria ?
   (xi) Give an example of root nodule bacteria.
   (xii) Give an example of protist and animal interaction. 1×10=10