NKT/KS/17/5054

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. Write general characteristics of cyanobacteria and give their applications. 10

OR

Write general characteristics of archaeobacteria with special emphasis on methanogens. 10

2. Describe sexual reproduction in fungi. 10

OR

Compare prokaryotes with eukcaryotes with suitable diagrams. 10

3. (a) Diagrammatically represent lytic cycle. 5

(b) Describe icosahedral and helical symmetry of viruses. 5

OR

(c) Describe Chick embryo method of virus cultivation. 5

(d) Write general characteristics of viruses. 5

4. (a) Write a note on mutualism with suitable examples. 2½

(b) Explain interaction between Bdellovibrio and E.coli. 2½

(c) Write a note on Parasitism. 2½

(d) Write a note on Rumen-bacteria. 2½

OR

(e) Explain Commensalism with suitable examples. 2½

(f) Describe Competition with suitable examples. 2½

(g) Write a note on Bioluminescence. 2½

(h) What is antagonism ? Explain with examples. 2½

5. Answer any **TEN** :—

(i) Give the full form of 'PPLO'. 1

(ii) What is meant by 'energy parasites' ? 1

(iii) Write any two applications of actinomycetes. 1

(iv) Give two examples of conidiospore forming fungi. 1

(v) Which disease is caused by Trypanosoma cruzi ? 1

(vi) Give any two economic importance of algae. 1

(vii) Give two examples of viruses having complex symmetry. 1

(viii) Name the scientist who is credited with the discovery of viruses. 1

(ix) What is cytopathic effect ? 1

(x) Define Syntrophism. 1

(xi) What is Synergism ? 1

(xii) Give any two examples of bacteria found in midgut of insect. 1