

B.Sc. (CBCS Pattern) Semester - I
MIC-01 - Microbiology Paper-I (Fundamentals of Microbiology)

P. Pages : 2

Time : Three Hours



GUG/S/23/11558

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe the contribution of various scientist to solve the controversy over spontaneous generation. **10**

OR

a) Describe the contribution of Louis Pasteur. **2½**

b) Describe the contribution of Robert Koch. **2½**

c) Write contribution of Alexander Fleming. **2½**

d) Describe various basic branches of microbiology. **2½**

2. Describe the structure and function of Gram-positive cell wall. Write difference between gram positive and gram-negative cell wall. **10**

OR

a) Describe structure of bacterial endospore with well labelled diagram. **2½**

b) Describe the structure and function of Flagella. **2½**

c) Write a note on plasmid. **2½**

d) Compare prokaryotic cell with eukaryotic cell. **2½**

3. Describe in detail different methods of classification of bacteria. **10**

OR

a) Write note on concept of taxa, Genus, Species, Strain, Family. **2½**

b) Write note on Bergey's Manual of Determinative and systematic Bacteriology. **2½**

c) Describe Whittaker classification system. **2½**

d) Describe taxa, Genus and species. **2½**

4. Describe different methods of reproduction in Molds and Yeasts. **10**

OR

- a) Write general characters of viruses. 2½
- b) Describe lytic cycle for replication of viruses. 2½
- c) Draw well labelled diagram of T₄ Bacteriophage. 2½
- d) Write a note on Archaeobacteria. 2½

5. Answer any ten

- a) What is dust free box. 1
- b) Write contribution of A.M. Chakraborty. 1
- c) Write the contribution of Schroder & Von Dusch. 1
- d) Define Prokaryotic Cell. 1
- e) What is capsule in bacteria. 1
- f) Write the various shapes of Bacteria. 1
- g) Define strain. 1
- h) What is Taxonomy? 1
- i) What is the Bergey's Manual of Systematic Bacteriology. 1
- j) Give two examples of Helical symmetry of viruses. 1
- k) What are Halophiles? 1
- l) Give one example of bacterial viruses. 1
