

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

P. Pages : 2

Time : Three Hours



**GUG/S/24/11558**

Max. Marks : 50

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- Notes : 1. All questions are compulsory.  
2. Draw well labelled diagram wherever necessary.

1. Discuss controversy over spontaneous generation with different experiment. **10**

**OR**

- a) Give the contribution of Louis Pasteur in microbiology. **2½**
- b) Give the contribution of Robert Koch in the field of microbiology. **2½**
- c) Describe the basic branches of microbiology. **2½**
- d) Discuss the scope of microbiology. **2½**

2. Describe the structure, function and arrangement of Bacterial flagella. **10**

**OR**

- a) What is plasmid? Describe any three types of plasmid. **2½**
- b) Give the structure and function of capsule. **2½**
- c) Give the structure of endospore. **2½**
- d) Compare between Prokaryotic cell & Eukaryotic cell. **2½**

3. Explain following methods of microbial classification. **10**

- a) Intuitive and.
- b) Genetic relatedness.

**OR**

- a) What is binomial nomenclature of bacterial classification? Explain. **2½**
- b) Explain Whitaker's classification in brief. **2½**
- c) Write note on Bergey's manual of bacteriology. **2½**
- d) Explain r-RNA sequencing method of classification. **2½**

4. Discuss replication of viruses by lytic cycle. 10

**OR**

- a) Give general characteristics of viruses. 2½
- b) Discuss cultivation of animal virus by chick embryo inoculation. 2½
- c) Give an account on Icosahedral symmetry in viruses. 2½
- d) Explain Haemagglutination method for detection of viral growth. 2½

5. Write **any ten**.

- a) Give the contribution of Schroder and Von Dusch. 1
- b) Define Geomicrobiology. 1
- c) What is Dust Free Box? 1
- d) Write any two examples of gram negative bacteria. 1
- e) What is slime layer? 1
- f) What is peptidoglycan? 1
- g) Define taxonomy? 1
- h) Give significance of Carl Woese system. 1
- i) What is genus? 1
- j) What is CPE? 1
- k) Give two examples of viruses having helical symmetry. 1
- l) Give two examples of Animal viruses. 1

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