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Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.BT (2011 &amp; Onwards) (Sem.-1)

**PRINCIPLES OF MICROBIOLOGY**

Subject Code : MSBT-109

Paper ID : [F0255]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION-A****1. Answer briefly :**

- a) What are Koch's postulates?
- b) What is enrichment medium?
- c) What is the structure of bacterial flagella?
- d) What is Bergey's system of bacterial classification?
- e) What is dolipore septum?
- f) What is generation time?
- g) What is chemostat?
- h) What is biological nitrogen fixation?
- i) What are exotoxins and endotoxins?
- j) What are sulfa drugs?

### SECTION-B

2. Give a comparative account of cell wall of Gram positive and Gram negative bacteria.
3. Describe the structure of replication of a DNA virus with a diagram.
4. Describe various nutritional categories of microorganisms.
5. Describe the role of exotoxins in disease, virulence and pathogenesis.
6. Describe the molecular characteristics used in microbial taxonomy.

### SECTION-C

7. What are pure culture techniques? Describe various pure culture techniques giving merits and demerits in each case.
8. What is sterilization? Discuss various physical and chemical agents of microbial control.
9. What are antimicrobial drugs? Describe their characteristics, mechanism of action and factors influencing their effectiveness.