

Roll No. : .....

Total No. of Questions : 16 ]

[ Total No. of Printed Pages : 3

# SEM-1033

M.Sc. (Ist Semester) Examination, 2022

## MICROBIOLOGY

Course Code - FS-MIC-CC-101

(General Microbiology and Bacteriology)

Time : 3 Hours ]

[ Maximum Marks : 40

**Note :-** This question paper contains three Sections.

### Section-A

(Marks : 1 × 10 = 10)

**Note :-** The candidate is required to answer all the *ten* questions carries 1 mark each. The answer should not exceed 50 words.

### Section-B

(Marks : 3 × 5 = 15)

**Note :-** The candidate is required to answer *five* questions by selecting at least *one* question from each Unit. Each question carries 3 marks. Answer should not exceed 200 words.

### Section-C

(Marks : 5 × 3 = 15)

**Note :-** The candidate is required to answer *three* questions by selecting *one* question from each Unit. Each question carries 5 marks. The answer should not exceed 500 words.

### Section-A

1. (i) What are Prokaryotes ?
- (ii) What do you understand by Firmicutes ?

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- (iii) Why 16S rRNA is used in bacterial taxonomy ?
- (iv) Define Sterilization.
- (v) Give *two* names of chemical antimicrobial agents.
- (vi) What is EMB medium ?
- (vii) Write the function of Gram's Iodine.
- (viii) Give *two* names of Probiotic bacteria.
- (ix) Give *two* names of Nitrogen fixing bacteria.
- (x) Give *two* names of Gram Negative Bacteria.

### **Section-B**

#### **Unit-I**

- 2. What are unculturable bacteria ?
- 3. Write a short note on Phenetic classification approach.
- 4. Write the importance of Bergey's manual of Systematic Bacteriology.

#### **Unit-II**

- 5. What do you understand by Synchronous growth of Bacteria ?
- 6. Give mathematical expression of growth curve.
- 7. Write a short note on selective media.

#### **Unit-III**

- 8. Write a short note on Streptomyces.
- 9. Write general characters of Archaeobacteria.
- 10. Write general character of Bdellovibrio.

### **Section-C**

#### **Unit-I**

- 11. Differentiate between Prokaryotic and Eukaryotic cell.
- 12. Explain in detail about polyphasic classification approaches.

### **Unit-II**

13. Explain in detail about types of sterilization methods.
14. Explain in detail about aerobic and anaerobic methods of cultivation.

### **Unit-III**

15. Write an essay on Nitrogen fixing Bacteria.
16. Write an essay on Photosynthetic Bacteria.