

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

BIOTSEM-136

M.Sc. (Ist Semester) Examination Dec., 2022

BIOTECHNOLOGY

Paper -BT-103

(Concept of Microbiology)

Time : 3 Hours]

[Maximum Marks : 40

The question paper contains three Sections.

Section-A (Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions. Answer should not exceed **50** words. Each question carries **1** mark.

Section-B (Marks : 3 × 5 = 15)

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

Section-C (Marks : 5 × 3 = 15)

Note :- Answer any *three* questions by selecting at least *one* question from each Unit. The answer should not exceed **500** words. Each question carries **5** marks.

Section-A

1. (i) What is Quorum sensing ?
- (ii) Write any *two* gram positive bacteria.

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(1)

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- (iii) Write any edible fungi.
- (iv) Write short note on phase contrast Microscopy.
- (v) Write the causal organism of citrus canker.
- (vi) What is Nucleocapsid ?
- (vii) What do you mean by Nitrogen Fixation ?
- (viii) Write the full form of SAARS.
- (ix) What is Food Poisoning ?
- (x) What are Impingers ?

Section-B

Unit-I

- 2. Write a short note on Physical and Chemical methods of sterilization.
- 3. Write the principle and applications of SEM.
- 4. Write a note on distinctive characters and uses of fungi in industry.

Unit-II

- 5. Write a note on cytoplasmic inclusions of bacteria.
- 6. Describe the chemical and physical properties of virus.
- 7. Write short notes on the following :
 - (i) TMV
 - (ii) AIDS

Unit-III

- 8. Write a short note on food borne pathogens.
- 9. Write about air borne diseases.
- 10. Describe the nitrogen cycle.

Section-C

Unit-I

11. Write a detailed note on different fixation and staining techniques for EM.
12. Write notes on the following :
 - (i) Types of media
 - (ii) Pure culture isolation techniques

Unit-II

13. Write differences between gram positive and gram negative bacteria.
14. Describe general characteristics of virus and also explain multiplication of virus.

Unit-III

15. Write notes on following :
 - (i) Food preservation
 - (ii) Food spoilage
16. Write a detailed note on soil microflora.