

No. of Printed Pages : 2

Sl. No.

21BTH1C4L

M.Sc. I Semester Degree Examination, April/May - 2023

BIOTECHNOLOGY

General Microbiology

Time : 3 Hours

Maximum Marks : 70

Instructions : (i) Answer **any five** of the following questions with Question **No. 1 (Q1)** **compulsory**, each question carries **equal** marks.

(ii) Draw neat diagrams wherever necessary.

1. (a) Explain the five-kingdom system of classification. **5**
- (b) Define systematics and explain about three broad categories of living thing. **5**
- (c) Explain four kingdom system of classification. **4**
2. (a) Write an account on classification of bacteria based on morphology. **7**
- (b) Explain the structure and function of Lipopolysaccharide layer in Gram-negative bacteria. **7**
3. (a) Define culture media and explain its types with example. **5**
- (b) Give a brief account on fungal growth media. **5**
- (c) Explain about classification of algae. **4**
4. (a) Describe the structure and nutrition of protozoa. **7**
- (b) Explain briefly about general characteristics and morphology of viruses. **7**
5. (a) Explain about antibiotic resistance in bacteria. **5**
- (b) Describe the microbial death curve. **5**
- (c) Explain the method of capsule staining. **4**
6. (a) Explain cell wall structure in Gram-positive and Gram-negative bacteria's. **7**
- (b) General characteristics of *Myxomycetes* and *Zygomycetes*. **7**

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7. (a) Define Staining, its principle and steps involved in Gram's staining. **7**
- (b) Describe prions, its unique characteristics and explain the differences between viruses, viroids and prions. **7**
8. (a) Define endospore, describe its structure and spore formation in bacteria. **7**
- (b) Explain Growth curve and discuss on microbial growth measurements. **7**

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