



## **ED-333**

M.Sc. 1st Semester  
Examination, March-April 2021

### **BIOTECHNOLOGY**

Paper - III

Microbial Physiology

*Time* : Three Hours] [*Maximum Marks* : 80  
[*Minimum Pass Marks* : 16

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**Note** : Answer **all** questions in which Question Number 1 is compulsory. All questions carry equal marks.

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1. Write short notes on the following :

- (a) Ribosomal rRNA sequencing
- (b) Synchronous growth
- (c) Methanogens
- (d) Define Mutualism and Parasitism

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*(Turn Over)*

( 2 )

**Unit-I**

2. Describe new approaches of bacterial taxonomy.

**OR**

Write short notes on the following :

- (a) Phylogenetic trees  
(b) Define classification, nomenclature and identification

**Unit-II**

3. Explain about metabolic diversity among microbes.

**OR**

Write short notes on the following :

- (a) Methanogenesis  
(b) Nitrogen metabolism

**Unit-III**

4. Discuss briefly the structure, function and classification of fungi with suitable examples.

**OR**

Write short notes on the following :

- (a) Difference between lytic and lysogeny cycle  
(b) Describe the ultra structure of algal cell

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**Unit-IV**

5. Give structure and mode of action of three broad spectrum antibiotics.

**OR**

Write short notes on the following :

- (a) Transmission mechanism of disease  
(b) Side effect of chemotherapy