

8. Write notes on the following :

- (a) Antibiotic resistance control methods.
- (b) Biosensor for the detection of pathogens in food.
- (c) Biopolymers vs chemical based polymers :
  - (i) Pros
  - (ii) Cons

7+7+6=20

No. of Printed Pages : 4

Roll No. ....

**AA333**

**M.Sc. EXAMINATION, May 2019**

(First Semester)

(B. Scheme) (Re-appear)

BIO-TECHNOLOGY

BT505 MS

Microbiology-I

*Time : 3 Hours]*

*[Maximum Marks : 100*

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Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

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**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

### Unit I

1. Describe the importance of microbes in industrial microbiology. Cite specific examples to support your answer. **20**
2. Describe the following :
  - (a) Causal organism of disease
  - (b) Improvement of microbes through genetic manipulation :
    - (i) Pros
    - (ii) Cons **10×2=20**

### Unit II

3. What is phylogenetic diversity and describe methods to determine it ? **20**
4. Discuss in detail about the functional anatomy of bacteria, virus and fungi. **20**

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### Unit III

5. Discuss the design of culture media for the isolation and identification of :
  - (a) Anaerobic bacteria
  - (b) Fungi
  - (c) Aerobic bacteria **6+7+7=20**
6. Write notes on the following :
  - (a) Methods for measurement of growth of micro-organisms.
  - (b) Methods for sterilization of medium and their limitations, if any. **10×2=20**

### Unit IV

7. Discuss the clinical microbiology, pathogenesis and control of :
  - (a) Influenza
  - (b) Viral-fever
  - (c) Food pathogens **6+7+7=20**

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P.T.O.