

NA-505

Seat No. _____

First Year B. Sc. Examination

April / May – 2003

Industrial Microbiology

Paper - I : Fundamentals of Industrial Microbiology

(Vocational)

(New Course)

Time : **3** Hours]

[Total Marks : **70**

Instruction : All questions carry **equal** marks.

1 Answer the following : (any **two**)

- (a) Explain why Louise Pasteur is considered father of microbiology.
- (b) Describe the discovery of anaerobic microbial world. Discuss their important characteristics.
- (c) Describe important historical events in the field of chemotherapy.
- (d) How the fermentative physiology differs from respiratory physiology ?

2 Answer the following : (any **two**)

- (a) Enlist the characteristics of a prokaryotic cell
- (b) Describe the fine structure of bacterial flagella
- (c) Discuss the sexual reproduction among fungi
- (d) What are Actinomycetes ? Enlist their characteristics and give their industrial importance.

- 3** Answer the following : (any **two**)
- (a) Describe the enrichment culture technique in detail.
 - (b) Enlist and describe the isolation methods for industrially important organisms.
 - (c) What is inoculum ? Describe the methodology for preparation of inoculum.
 - (d) Describe the selective and differential media for bacterial cultivation.
- 4** Describe in detail different methods of gene transfer among bacteria.

OR

- 4** What is mutation ? Describe in detail chemical mutagenesis.
- 5** Write short notes on : (any **three**)
- (a) Robert - Koch
 - (b) Lyophilization
 - (c) Mesosomes
 - (d) Tyndallization
 - (e) Scope of industrial microbiology.
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