NA-505  
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.