

H-56074

Seat No. _____

M. Sc. (Part - II) Examination

April / May – 2003

Microbiology : Paper - V

(Economic Microbiology)

Time : 3 Hours]

[Total Marks : 100

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

- 1** Discuss any **two** critically :
 - (a) Microbial production of penicillin and its recovery.
 - (b) Treatment of various disease by modification, induction and or replacement of genetic material.
 - (c) 11- β hydrolysis of steroids and give significance.
 - (d) Principles and methodology used for production of various vaccines.

- 2** Write with examples any **two** :
 - (a) Fermentative production of beer
 - (b) Starter cultures and their uses
 - (c) Production and uses of glutamic acid
 - (d) Microbiology of vitamin B_{12} production.

- 3** Describe microorganism used, critical parameters of fermentation and uses of
 - (a) Fungal amylases
 - (b) Proteases
 - (c) Acetone-butanol
 - (d) gibberalic acid.

4 Answer any **two** :

- (a) What is gasohol ? Explain its global scenario.
- (b) Discuss microbial production of Dextran and give recovery process.
- (c) Discuss comparative potential of biosurfactants and synthetic surfactants.
- (d) Describe microbiology and biochemistry of bio-gas production.

5 Discuss critically any **two** :

- (a) Role of sulfur bacteria in metal extraction.
- (b) Bioreactor process for metal extraction from concentrates
- (c) Desulfurization of coal and give its significance
- (d) Role of microorganisms in secondary recovery of oil.
