Exam.Code:0004
Sub. Code: 0377

2071

B.A./B.Sc. (General) Fourth Semester

Industrial Microbiology (Elective)

IMB-402: Microbial Technology

Time allowed: 3 Hours | Max. Marks: 33

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Write short answers:-

a) Prototrophs

b) Lyophilization

c) Saccharomyces cerevisiae

d) Lytic enzymes

e) Aerobic fermentation (5x1)

UNIT - I

II. a) Explain the role of microbes in industrial biotechnology.

b) Describe the methods of preservation of bacteria of industrial importance? (2x3½)

III. a) Discuss the Primary and Secondary screening methods for microbes.

b) How the isolates of interest are selected and identified? (2x3½)

UNIT - II

IV. a) Discuss the batch fermentation process and its requisites.

b) How will you purify and concentrate protein product after fermentation process? (2x3½)

V. a) How continuous culturing of microbes have advantages over batch Culturing? Discuss.

b) Discuss the importance of control of various parameters in a fermentation production process. (2x3½)

P.T.O.

UNIT - III

VI. a) Describe the commercial production of Acetic acid.

b) Name the microbe used for production of amino acids? Discuss in detail the conditions required for its production. (2x3½)

VII. a) Explain the bioprocess for Glutamic acid production.

b) What are the strategies followed to control the quality of industrial products? (2x3½)

UNIT - IV

VIII. a) Explain with suitable examples discuss the role of microbes in mineral recovery.

b) Describe the microbiology of bio-deterioration of paper and metals. (2x3½)

IX. a) Describe the role of microbes in oil recovery and metal corrosion.

b) Define the term biodeterioration? Describe the microbes involved in the deterioration of wood and paper. (2x3½)

x-x-x