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Exam.Code:1032
Sub. Code: 7865

1128
M. E. (Bio-Technology)
First Semester
ME-BIO-103: Microbial Bio-Technology

Time allowed: 3 Hours **Max. Marks: 50**

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

x-x-x

I. Answer the following briefly:-

a) Name the production strain of [laconic acid

b) Are there any drawbacks of a microbial fuel cell? Mention any two.

c) Give the mode of action of the chitinase enzyme.

d) Name a halopilic and a thermophilic microorganism.

e) How can production of siderophores assist in pathogen control?

f) Give the source and use of beta carotene.

g) Screening is an important step in bioprospecting. Why?

h) What are biotherapeutics?

i) Give the role of the peroxidise enzyme.

j) How many generations of antibiotics are known so far? Why is there a need for successive generations? (10x1)

UNIT – I

II. Discuss bioprospecting to trap diverse microflora producing chitinase enzyme. (10)

III. a) Describe the microbial production of propionic acid.

b) Detail the microbial production of inulinase enzyme. (5,5)

IV. Elaborate on the steps followed for the production of recombinant insulin. (10)

UNIT – II

V. Give the construction, working and efficiency of any microbial fuel cell. (10)

P.T.O.

VI. How can microorganisms found in extreme environments be used in biotechnological applications? (10)

VII. Write short notes on:-

a) GMP

b) Leaching of ores

c) Biofertilizers

d) Waste stabilization (4x2½)

x-x-x