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Ref. No.: EX/FTBE/T/316/2017(S)

B.FTBE 3 RD YEAR 1 ST SEMESTER SUPPLYMENTARY EXAMINATION- 2017

MICROBIAL TECHNOLOGY Time: 3hrs Full Marks: 100

Use Separate Answer Script for each Part

(50 marks for each part)

PART- I

Answer question 1 and any two from the rest.

1. Explain the following: 4x5

a) Lactose and CSL as medium component for penicillin fermentation.

b) mashing and wort boiling for beer fermentation.

c) ethanol fermentation from starchy material.

d) upstream and downstream processing of a fermentation process.

2a) State and explain about selection of organism for ethanol fermentation.

b) Name two types of molasses and differentiate between them.

c) How would you get ethanol from fermentation broth. 6.5+3.5+5

3a) Differentiate between:

i) ale beer and lager beer

ii) primary and secondary metabolite

b) What is antibiotic? Explain the mode of action of penicillin. Comment on , , , isolation of Penicillin from fermented broth. 5+1.5+2.5+6

4. Write short notes on(any three) of the following : 3x5

a) hops for production of beer

b) defects of wine

c) compressed and active dry yeast

d) malt and malt adjunct

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B.FTBE 3RD YEAR 1ST SEM SUPPLEMENTARY EXAM-2017

MICROBIAL TECHNOLOGY **Time: Three Hours** **Full Marks: 100**

Use Separate Answer Scripts for Part I and Part II

Part II (Marks-50)

Question No.1 is Compulsory and answer any **two** questions from rest

1. a) What is Homofermantative and Heterofermantative Lactic acid bacteria?

b) Why they are different?

c) Name two edible mushrooms. 4+4+2=10

2. What is enzyme immobilization? What are the merits of enzyme immobilization? What are the advantage and disadvantages of pure enzyme immobilization over whole cell immobilization?

2+6+6+6=20

3. a) For intracellular enzymes how cell disruption is done?

b) What are the criteria for selection of microorganism for enzyme production?

c) Write about the techniques of enzyme isolation and purification. 6+4+10=20

4. a) What are the advantages and disadvantages of algal protein as a source of food? 5+5

b) Write about the commercial production of glucose from starch by microbial digestion. 10

5. a) Write short notes on any **two**: 2x10=20

i. Spore process for microbial transformation of Progesterone

ii. Microbial production of Lactic acid

iii. Methods of enzyme immobilization