BTF/32E4/103/2005

B. TECH. (FTBE) FINAL EXAMINATION, 2005

(2nd Semester)

FOOD BIOTECHNOLOGY

Time : Three hours Full Marks : 100

(50 Marks for each part)

Use a separate Answer-Script for each part

PART - I

Answer any *three* questions

All Questions carry equal marks

1. Explain the following:

   i) Application of r-DNA technology in Food Production & Processing.

   ii) Tissue culture technique has become important in Quality Food Production in Agriculture.

2. Discuss possible use of biopreservative in Food. How it is different from antibiotics ? Explain production of any one of biopreservatives.

3. Explain the enzymic hydrolysis of protein is important for fabrication of different foods. How will you measure degree of hydrolysis of protiens. Explain modification of enzymic hydrolysis of proteins can be made using r-DNA technology.

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4. Discuss the kinetics of Lactic acid production. Discuss the use of Lactic acid bacteria in different food system. What is biopolymer ?

5. Write short notes on :

   a) Single cell protein is important in World Food Chain.

   b) Modification & use of Corn syrup.

PART - II

Answer any *three* questions

All Questions carry equal marks

6. What do you mean by the term ‘Single cell protein” ? Discuss the possibility of production of single cell protein from different sources. Write down the prospects of SCP in food chain. What are the barriers for acceptance of SCP in food ?

7. What is HPLC ? Give a neat flowsheet diagram of a typical system of HPLC. Describe the different parts and accessories of HPLC with their function. Write down its application in food analysis.

8. What are the essential factors of algal growth ? Describe the process of production of algae from wastes including recovery process.

9. Why fermented foods are so popular ? Classify the fermented foods. Outline the biotechnological process for production of a fermented food from cereal and a milk beverage.

10. Write short notes on (any two)

    a) Application of GLC in food analysis.

    b) Preparation of Yogurt.

    c) Use of immobilized enzyme in food biotechnology.

    d) Spectrophotometer.