

BACHELOR OF ENGINEERING (F.T.B.E.) EXAMINATION, 2017

(4TH Year, 2nd Semester)

ELECTIVE PAPER (FOOD BIOTECHNOLOGY)

Time : Three hours

Full Marks : 100

Use a separate Answer-Script for each part

PART - I (50 Marks)

Group-A

Answer any two questions from group A

20×2 = 40

1. What is the importance of modified starch in food processing? Write the different forms of modified starch. Briefly describe the different biotechnological processes for starch modification. 6+7+7 = 20
2. Write the applications of oligo-saccharides in food processing and their advantages. What are the different types of oligosaccharides used in food product development? Briefly describe the biochemical production of oligosaccharides. 7+4+9=20
3. What are the different methods of protein modification in food processing? Write the applications of modified proteins in food product development. What are the detrimental effect of modified protein in food products? 8+8+4=20

Group-B

Answer any one question from Group-B

4. Describe trans esterification process. Write the effect of trans-esterified fat in food processing. 6+4 = 10
5. Write the safety issues regarding fermented foods. Write the quality parameters of any one fermented food product. 5+5 = 10

[Turn over

Ex/FTBE/T/422D/2017

B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING FOURTH YEAR SECOND SEMESTER – 2017

Subject: FOOD BIOTECHNOLOGY

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 **three** questions from rest

1. Write about any **one**: 5
 - a) Explain with **two** example that how processed food quality can be improved by application of biotechnological processes. 5
 - b) What is a fermented food? What are the advantages and disadvantages of fermented food? 1+2+2=5
2. What is SCP? Why it is developed? What are the problems related to SCP consumption? Write about the production of SCP using any **two** substrates. 1+2+3+(4.5+4.5)=15
3. What is DNA Transcription and Translation? How DNA is replicated? (5+5)+5=15
4. What is rDNA Technology? What are the tools required for rDNA Technology? Explain the technique of rDNA Technology? How rDNA technology is applied in Food Industry explain with few examples. 1+3+6+5=15
5. Write short notes on any **two**: 7.5x2=15
 - a) A Meat based fermented food
 - b) A fruit based fermented food.
 - c) A legume based fermented food.