Dr Anil kant

MAX. MARKS: 25

COURSE CODE: 21B1WBT831
COURSE NAME: Food Processing and Engineering
COURSE CREDITS: 03

MAX. TIME: 1 Hour 30 Min

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1   [3+3 = 6] CO III, IV

a. What do you understand by co-current and counter-current flow conditions in a heat exchanger? Discuss important points of temperature profile during these flow conditions.

b. Describe the design features of any two following heat exchangers; Plate heat exchanger Jacketed pan, 2-4 Heat Exchanger

Q.2   [3+3 = 6] CO IV

a. Examine the factors to be considered for choosing plant location, or plant layout design of food processing plant?

b. Discuss the role and responsibilities of food process Engineers?

Q.3   [6] CO II

a. What are lactic acid bacteria? Identify their general characteristics?

b. Name the species of Pedococcus and fermented foods? How come Pediococcus damnosus act as spoilage organism in beer fermentation

c. What are the most striking characteristics of Oenococcus oeni? What role does this species play in maturation of high acidic wines?

Q.4   [4+3 = 7] CO III

a. Analyze the advantages of fermented food, citing suitable examples wherever required?

b. Let you be interested to carry out milk fermentation dominated by Lactococcus lactis subsp. cremoris. What type of culture condition would be required to be maintained during starter culture production and fermentation. Mention reasons for your answer.