

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth Semester B.Tech Degree Regular and Supplementary Examination December 2020

Course Code: FT305**Course Name: Food Process Engineering**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two full questions, each question carries 15 marks.*

Marks

- 1 a) Define pasteurization. Explain the principle and working of HTST pasteurizer. (10)
- b) What are the important properties to be considered while selecting raw materials for a food industry? (5)
- 2 a) Explain the principle and process of cleaning the raw materials by dry method. (7.5)
- b) How can you calculate the energy required for size reduction? (7.5)
- 3 a) With the help of neat schematic representation explain any three equipments for size reduction of solid food. (15)

PART B*Answer any two full questions, each question carries 15 marks.*

- 4 a) What is the importance of spray drier in food processing? Explain its principle and working with the help of a neat schematic representation. (15)
- 5 a) Explain different thermodynamic properties represented in a psychrometric chart. (7.5)
- b) What is the consequence of maillard reaction in Baking process with examples? (7.5)
- 6 a) What is the importance of frying in food industry? Explain the process and types. (7.5)
- b) Elaborate the different stages of baking process. (7.5)

PART C*Answer any two full questions, each question carries 20 marks.*

- 7 a) Elaborate the mechanism of freezing. Also explain the effects of freezing on food? (10)
- b) Describe the importance of thawing? What are the mechanisms to carry out thawing in food processing units? (10)
- 8 a) Explain the different refrigeration methods followed for transporting food through land and air. (10)
- b) Differentiate twin and single crew extruders with schematic representations. (10)
- 9 a) Explain the principle and applications of PEF in food industry. (10)
- b) Elaborate the importance and effects of hurdle technology in minimal processing of food. (10)
