

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: FT482

Course Name: Food Process Engineering

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- | | | |
|---|---|-----|
| 1 | a) State Rittinger's Law for estimating the energy for size reduction of solids | (5) |
| | b) Explain the principle of working of Tumbling mills | (3) |
| | c) Explain various wet cleaning methods | (7) |
| 2 | a) Write a short note on HTST pasteurization. | (5) |
| | b) What are F and D values | (5) |
| | c) Explain structure and working of any one type of Homogenizers used for the size reduction of liquid food | (5) |
| 3 | a) Describe different types of Attrition Mills | (5) |
| | b) What are the different methods of Peeling | (5) |
| | c) Explain the purpose of Blanching | (5) |

PART B

Answer any two full questions, each carries 15 marks.

- | | | |
|---|---|-----|
| 4 | a) With the help of graph explain Drying rate curve | (5) |
| | b) Explain the water activity in Solids | (3) |
| | c) Explain VA refrigeration system | (7) |
| 5 | a) Write a short note on Refrigerants | (5) |
| | b) Write the equation for calculating the freezing time and explain each terms | (4) |
| | c) Compare the Working of Tunnel Drier and Conveyer Belt Drier | (6) |
| 6 | a) What are the different properties of air described in a Psychrometric chart? | (5) |
| | b) Explain Fluidized bed Drier | (3) |
| | c) Explain the working of Cryogenic Freezers with the help of neat diagram | (7) |

PART C

Answer any two full questions, each carries 20 marks.

- | | | |
|---|---|------|
| 7 | a) How are liquid and solid foods filled volumetrically and gravimetrically in food industries. | (10) |
|---|---|------|

- b) Write a note on kinetics of oil uptake (5)
- c) How does Extrusion process affect food materials (5)
- 8 a) Write a short note on the principle of Sedimentation (7)
- b) Explain the structure and working of a Disc Bowl Centrifuge with neat sketch. (8)
- c) Write a short note on the frying process (5)
- 9 a) Explain different Food packaging materials (10)
- b) Explain Pulsed Electric field heating method of minimal processing (6)
- c) Explain CAP. (4)
