

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIFTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), DECEMBER 2019

Course Code: FT305

Course Name: FOOD PROCESS ENGINEERING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

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|---|---|------|
| 1 | a) Describe the criteria and methods of sorting of raw materials in food processing industry | (5) |
| | b) Distinguish between HTST and LTLT pasteurization | (10) |
| 2 | a) What are the important peeling methods followed in food industries | (5) |
| | b) What are the equipments used for making immiscible solvents into miscible one? Explain with its applications in food industry. | (10) |
| 3 | a) Discuss about major size reduction laws regarding food | (9) |
| | b) Describe working of i) Ball mill ii) Disc mill iii) Hammer mill | (6) |

PART B

Answer any two full questions, each carries 15 marks.

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| 4 | a) Derive an equation for prediction of drying time in constant rate and falling rate period | (12) |
| | b) What do you meant by sorption isotherm? | (3) |
| 5 | a) Explain construction and working of a spray dryer with neat sketch | (8) |
| | b) Explain different types of baking ovens. | (7) |
| 6 | a) Distinguish between shallow frying and deep fat frying | (5) |
| | b) Explain the purposes of different ingredients used in baking | (10) |

PART C

Answer any two full questions, each carries 20 marks.

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| 7 | a) Explain VC refrigeration systems with major components | (7.5) |
| | b) What are different refrigerants used and what are the properties of an ideal refrigerant? | (7.5) |
| | c) Explain air transport refrigeration mechanisms for food | (5) |
| 8 | a) Explain different methods of precooling of food | (10) |

- b) Describe hurdle technology (10)
- 9 a) Explain different stages of a single screw extruder with neat sketch (8)
- b) Describe PEF heating of foods (6)
- c) Discuss about ohmic heating of food (6)
