

Reg No.: _____

Name: _____

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

Course Code: FT203

Course Name: FOOD CHEMISTRY

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

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| 1 | a) Give the classification of food groups. | (5) |
| | b) Write down the importance of food chemistry in food technology. | (5) |
| 2 | a) Illustrate the methods for determination of moisture content in foods. | (6) |
| | b) Explain about the structure of water molecule. | (4) |
| 3 | a) Give a detailed account on sugar alcohols. | (4) |
| | b) Elaborate on the functional roles of carbohydrates in food. | (6) |
| 4 | a) Differentiate dextrose equivalent and degree of polymerization. | (4) |
| | b) Write down the classification of carbohydrates. Give example for each classification. | (6) |

PART B

Answer any three full questions, each carries 10 marks.

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| 5 | a) Give a detailed account on the functional roles of protein in food. | (6) |
| | b) Write a short note on texturized protein. Give an example. | (4) |
| 6 | Give in detail on physical and chemical properties of protein. | (10) |
| 7 | a) List out any 4 properties of fats and oils. | (6) |
| | b) Differentiate saturated and unsaturated fatty acids with examples. | (4) |
| 8 | a) Write a short note on shortening power of fats. | (4) |
| | b) Differentiate oxidative rancidity and hydrolytic rancidity. | (6) |

PART C

Answer any four full questions, each carries 10 marks

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| 9 | a) Write short notes on preservatives with examples. | (4) |
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- b) Give a detailed account on the role of thickeners. Give two examples. (6)
- 10 a) List out any 5 functions of vitamins in human body. (5)
- b) List out the names of diseases associated with the deficiency of vitamin A, E, D, B and C. (5)
- 11 a) Differentiate stabilizers, emulsifiers and leavening agents. (5)
- b) Write a short note on role of minerals in human body. (5)
- 12 Elaborate on protein malnutrition. (10)
- 13 Give a detailed account on balanced diet. (10)
- 14 a) Define calorie. (2)
- b) Compute the calorie value for a food, which contains 10 g of fat, 3.5 g of protein, 0.5 g of dietary fibre & 35 g of carbohydrate. (5)
- c) Explain shortly about obesity. (3)
