

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
THIRD SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

**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

- |   |   |     |
|---|---|-----|
| 1 | a) Elucidate the structure of water and its types.            | (6) |
|   | b) Highlight the role and scope of food chemistry.            | (4) |
| 2 | a) Give a detailed note on water quality for food processing. | (5) |
|   | b) Exemplify the importance of food and its groups.           | (5) |
| 3 | a) Give four major properties of carbohydrates.               | (4) |
|   | b) Classify polysaccharides in detail with examples.          | (6) |
| 4 | a) Describe about the composition and properties of starch.   | (5) |
|   | b) Differentiate dextrose equivalent and sweetness index.     | (5) |

**PART B**

*Answer any three full questions, each carries 10 marks.*

- |   |   |     |
|---|---|-----|
| 5 | a) Give the biological functions of proteins.                           | (6) |
|   | b) Differentiate essential and non essential amino acids with examples. | (4) |
| 6 | a) Classify proteins based on structure.                                | (6) |
|   | b) Explain any four roles of proteins in food.                          | (4) |
| 7 | a) Describe fat replacements.   | (4) |
|   | b) Define lipid and classify it.  | (6) |
| 8 | a) Differentiate plasticity and isomerisation.                          | (4) |
|   | b) Give an account on structure and composition of fats.                | (6) |

**PART C**

*Answer any four full questions, each carries 10 marks.*

- |    |  |     |
|----|--|-----|
| 9  | a) Define food additives and classify it in detail.            | (5) |
|    | b) Describe the functions and sources of fat soluble vitamins. | (5) |
| 10 | a) Give a detailed account on water soluble vitamins.          | (6) |
|    | b) Exemplify about dietary requirements.                       | (4) |
| 11 | a) Explain about food preservatives with suitable examples.    | (4) |
|    | b) Describe the role of vitamin A, C and D in food.            | (6) |
| 12 | a) Define BMR and its importance.                              | (4) |
|    | b) Give a detailed account on necessity of balanced diet.      | (6) |
| 13 | a) Explain the importance of fat and protein in diet.          | (6) |
|    | b) Define carbohydrate factor and how it is calculated?        | (4) |
| 14 | a) Describe about obesity and its causes.                      | (4) |
|    | b) Elucidate the importance of minerals in nutrition.          | (6) |

\*\*\*\*