Scheme of Valuation/Answer Key

(Scheme of evaluation (marks in brackets) and answers of problems/key)

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 threefull questions, each carries 10 marks.	Marks
1	a)	Elucidate the structure of water and its types. Definition: 2 marks; Structure & Description: 2 marks; Types: 2 marks	(6)
	b)	Highlight the role and scope of food chemistry. Role: 2 marks; Scope: 2 marks	(4)
2	a)	Give a detailed note on water quality for food processing. Definition: 1 mark; Description: 4 marks	(5)
	b)	Exemplify the importance of food and its groups. Importance: 2 marks; Groups: 3 marks	(5)
3	a)	Give four major properties of carbohydrates. Minimum 4 points: 1 mark each	(4)
	b)	Classify polysaccharides in detail with examples. Definition: 2 mark; Classification: 4 marks	(6)
4	a)	Describe about the composition and properties of starch. Composition: 2 marks; Properties: 3 marks	(5)
	b)	Differentiate dextrose equivalent and sweetness index. Definition: 2 marks; Description: 3 marks	(5)

PART B

Answer any threefull questions, each carries 10 marks.

5	a)	Give the biological functions of proteins. Definition: 1 mark; Minimum 4 functions: 1 mark each.	(6)
	b)	Differentiate essential and non essential amino acids with examples. Definition: 1 mark; Classification: 2 marks; Examples: 1 mark	(4)
6	a)	Classify proteins based on structure. Definition: 1 mark; Classification: 4 marks	(6)
	b)	Explain any four roles of proteins in food. Minimum 4 points: 1 mark each	(4)
7	a)	Describe fat replacements. Definition: 1 mark; Description: 3 marks	(4)
	b)	Define lipid and classify it. Definition: 2 marks; Classification: 4 marks	(6)
8	a)	Differentiate plasticity and isomerisation. Minimum 4 points: 1 mark each	(4)
	b)	Give an account on structure and composition of fats. Structure: 2 marks; Composition: 4 marks	(6)

PART C

Answer any fourfull questions, each carries 10 marks.

9	a)	Define food additives and classify it in detail. Definition: 2 marks; Classification: 3 marks	(5)
	b)	Describe the functions and properties of vitamins. Definition: 1 mark; Functions: 2 marks; properties: 2 marks	(5)
10	a)	Give a detailed account on water soluble vitamins. Definition: 2 marks; Classification: 4 marks	(6)
	b)	Exemplify about dietary requirements. Definition: 1 mark; Description: 3 marks	(4)
11	a)	Explain about food preservatives with suitable examples. Definition: 1 mark; Description: 2 marks; Examples: 1 mark	(4)
	b)	Describe the role of vitamin A, C and D in food. Each subdivision: 2 marks each; Total-6 marks.	(6)
12	a)	Define BMR and its importance. Definition: 2 mark; Description: 2 marks	(4)
	b)	Give a detailed account on necessity of balanced diet Definition: 2 mark; Description: 4 marks	(6)
13	a)	Explain the importance of fat and protein in diet. Description: 3 marks each for fats and proteins	(6)
	b)	Define carbohydrate factor and how it is calculated? Definition: 2 mark; Calculation method description: 2 marks	(4)
14	a)	Describe about obesity and its causes. Definition: 2 mark; Causes: 2 marks	(4)
	b)	Elucidate the importance of minerals in nutrition. Definition: 2 mark; Importance, minimum 4 points: 4 marks	(6)
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