

**POST GRADUATE DIPLOMA IN FOOD
SCIENCE AND TECHNOLOGY (PGDFT)**

Term-End Examination

June, 2017

MFT-001 : FOOD CHEMISTRY AND NUTRITION

Time : 3 hours

Maximum Marks : 70

Note : (i) Attempt five questions.

(ii) All questions carry equal marks.

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1. Explain the following : 7x2=14
- (a) Water activity
 - (b) Complex carbohydrate
 - (c) Protein concentrate
 - (d) Auto oxidation
 - (e) Enzymatic browning
 - (f) Food additives
 - (g) RDA
2. (a) What are the different Forms of water present in food ? Write the significance of sorption isotherm in food processing. 2+3
- (b) Classify carbohydrates. Explain the physicochemical properties of carbohydrates. 2+4
- (c) What are the effects of processing on starch ? 3

3. (a) Classify proteins on the basis of shape and size and on the basis of products of hydrolysis. 4
- (b) Define essential amino acid and give examples. Explain food application of protein concentrates and isolates. 2+3
- (c) Describe the physicochemical properties of lipid. 5
4. (a) Write the functions of two water soluble vitamins. 4
- (b) Explain the role of enzymes in bread and brewing industry. 4
- (c) What are the deficiency syndromes of iron and iodine in human ? 3
- (d) Write a note on antinutritional factors in food. 3
5. (a) Describe the physical properties of milk. 5
- (b) Explain the process of conversion of muscle to meat. 5
- (c) What are the effects of processing on meat and fish protein ? 4
6. (a) Describe the effects of processing on fruits and vegetables. 5
- (b) Explain the structure of a cereal grain with the help of a diagram. 4
- (c) Describe the functional properties of pulse protein. 5

7. (a). Describe the factors to be considered for calculating RDA. 5
- (b) Explain the process of digestion of lipids in human body. 4
- (c) Write the dietary sources and deficiency symptoms of the following : 2.5+2.5=5
- (i) Vitamin A
- (ii) Calcium
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