

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

Term-End Examination

June, 2018

MFT-001 : FOOD CHEMISTRY AND NUTRITION

Time : 3 hours

Maximum Marks : 70

Note : (i) Attempt any five questions.

(ii) All questions carry equal marks.

1. Explain the following : 7x2=14
- (a) Bound water
 - (b) Non-calorific sweetener
 - (c) Antioxidants
 - (d) Anti-nutritional factors
 - (e) Browning reaction
 - (f) Essential fatty acid
 - (g) Polysaccharide
2. (a) What is the Correlation between moisture content and shelf-life of food ? Explain the adsorption and desorption isotherm. 7
- (b) Classify carbohydrates. Describe any three physico-chemical properties of carbohydrates. 7
3. (a) Distinguish simple and conjugated protein. Explain the functional properties of protein. 7
- (b) Describe lipolysis and auto-oxidation of lipids. How can the rancidity be prevented ? 7

4. (a) What are the functions of Vit. E ? Narrate the changes in vitamin content of foods during processing. 7
- (b) Classify minerals along with examples. Explain any one method used for estimation of mineral. 7
5. (a) What measures should be taken to reduce acrylamide formation in food ? Write a note on heavy metals in food. 7
- (b) Explain any two off flavours develop due to deterioration of milk fat. Discuss the fat constants of milk fat. 7
6. (a) Describe the structure of skeletal muscle with the help of a diagram. Give the flow diagram for post-slaughter changes in muscle. 7
- (b) Discuss different types of browning in fruits and vegetables. What is the effect of processing on volatile compounds of fruits and vegetables ? 7
7. (a) Explain the structure of soybean. What are the functional properties of wheat protein ? 7
- (b) Discuss the digestion and absorption of carbohydrates in our body. Write the deficiency symptoms of any two vitamins. 7
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