

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

**Term-End Examination**

**June, 2016**

**MFT-001 : FOOD CHEMISTRY AND NUTRITION**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Attempt all questions. Attempt two sub-parts from questions 1-6 and Four short notes from question 7. All questions carry equal marks.*

1. (a) Explain with examples the ways in which water is held in foods. 5
- (b) Discuss the functions and deficiency of folic acid. 2+3
- (c) Explain the chemical properties of proteins. 5
2. (a) Write about auto-oxidation and hydrogenation of fats. 5
- (b) How do you process a food sample for the determination of minerals ? Write the functions of iron in human body. 3+2
- (c) Define RDA. What are the various factors to be considered while formulating RDA ? 2+3
3. (a) Write a note on the classification of enzymes. What is the effect of enzymes on lipids ? 2+3
- (b) What are food additives ? Explain their use in food industry. 5
- (c) Explain the structure of grain with diagram. 5

4. (a) Describe the composition of egg white and yolk. Write about the effect of cooking on egg white. 3+2
- (b) List the different parts of the cereal grain. What gives wheat its unique quality? 2+3
- (c) Write a note on the proteins present in milk. List the various milk products. 4+1
5. (a) Define essential amino acids and give examples. Write note on protein concentrates. 2+3
- (b) What are the contributions of fruits and vegetables to the diet? 5
- (c) Explain the process of digestion and absorption of protein in human body. 5
6. (a) What are the functions of vitamin c? Write a note on its dietary sources. 3+2
- (b) List the enzymes used in the baking industry and explain how they affect the baking process. 5
- (c) What are emulsions? Explain the use of emulsifiers in food industry. 5
7. Write short notes on **any four** : 2.5x4=10
- (a) Sorption isotherm
- (b) Complex carbohydrates
- (c) Dietary fibers
- (d) Food colours
- (e) Uniqueness of fish fat
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