

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

Term-End Examination

00800

December, 2014

MFT-001 : FOOD CHEMISTRY AND NUTRITION

Time : 3 hours

Maximum Marks : 70

Note : All questions are compulsory.

1. (a) Explain the effects of food processing on carbohydrates. 3
- (b) Describe the structure of proteins. 4
- (c) Discuss Vitamin C with respect to its functions, dietary sources and deficiency. 3
2. (a) What are the physico-chemical characteristics of lipids ? 4
- (b) What determines the quality of food proteins ? Bring out the differences between animal and plant proteins. 3
- (c) Write a note on the factors that are important for the activity of enzymes. 3

3. (a) Give a brief account of the general methods used to determine the minerals in foods. 5
- (b) Discuss the functions and dietary sources of Vitamin E. 3
- (c) Write a note on the deficiency of Vitamin D. 2
4. (a) Write a note on the composition of pulses and oil-seeds. 5
- (b) Describe the changes that take place in meat during processing. 3
- (c) What are the functions and sources of Vitamin B₁₂? 2
5. (a) Describe the importance of folic acid. What is the RDA for folic acid for Indians? 3
- (b) Write a brief note on the digestion and absorption of lipids. 3
- (c) What are non-starch polysaccharides? What is their importance in health? 4
6. (a) Describe the nutritional anaemias with reference to the causes, diagnosis and consequences. 4
- (b) Give a brief account of the nutritive value of cereals, millets and vegetables. 3
- (c) Write a note on the deficiency disorders of thiamine, riboflavin and niacin. 3

7. Write short notes on any *four* of the following :

$$4 \times 2 \frac{1}{2} = 10$$

- (a) Balanced diets
 - (b) Naturally occurring toxins in foods
 - (c) Maillard reaction
 - (d) Pesticide residues in foods
 - (e) Determination of food proteins
 - (f) Fluorosis
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