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

**Term-End Examination**

**December, 2011**

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

*Time : 3 hours**Maximum Marks : 70*

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*Note : Attempt any four questions from question no. 1 to 5.  
Question no. 6 is compulsory.*

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|----|-----|--|---|
| 1. | (a) | How do you determine the moisture content of foods containing volatile components ?                | 5 |
|    | (b) | Describe the changes that take place in carbohydrates on processing of foods.                      | 5 |
|    | (c) | Explain the structure of a typical amino acid. What are the different ionic forms of amino acids ? | 5 |
|    |     |  |   |
| 2. | (a) | Explain how you would determine the protein content of wheat flour ?                               | 5 |
|    | (b) | Write briefly about the rancidity of fats and oils.  | 5 |
|    | (c) | What are protein hydrolysates ? What are their uses ?  | 5 |

3. (a) What are the pro - vitamin A ? Give the structure of the most important carotenoid. 5
- (b) Explain briefly the metabolism of vitamin D. 5
- (c) Explain enzymatic and non-enzymatic browning reactions. 5
4. (a) Give the composition of meat and egg. 5
- (b) What are food groups ? Discuss the basic considerations in formulating balanced diets. 5
- (c) What determines the quality of food proteins ? Explain with examples. 5
5. (a) Describe the role of enzymes in food processing. 5
- (b) List the water soluble vitamins. Give a brief account of the deficiency of vitamin B<sub>1</sub>. 5
- (c) What is the RDA for calcium for different age groups ? List the dietary sources of calcium. 5
6. Write short notes on *any four* of the following :
  - (a) Micotoxins 4x2.5=10
  - (b) Non - calorific sweeteners
  - (c) Deamination reaction
  - (d) Post harvest changes in fruits.
  - (e) Antinutritional factors.
  - (f) Trans fatty acids.