

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

Term-End Examination

December, 2013

MFT-001 : FOOD CHEMISTRY AND NUTRITION

Time : 3 hours

Maximum Marks : 70

Note : Attempt all questions. Attempt two sub parts from question No. 1-6 and four short notes from question No.7.

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1. (a) What are intermediate moisture (IMF) foods ? How is moisture estimated in foods ? 2+3
 - (b) "Enolization of sugars increases their reducing power". Justify the statement. 5
 - (c) Give the principle of protein estimation by Kjeldahl method in foods. 5

 2. (a) Write the composition of fish. 5
 - (b) What are protein concentrates ? Give the flow chart of its method of preparation. 1+4
 - (c) What is auto-oxidation of fat ? Give its mechanism. 2+3

 3. (a) What is water activity ? How does it indicate the packaging requirement ? 2+3
 - (b) Give the steps of refining of fats/oils. 5
 - (c) Discuss the structure and stability of vit C in food. 5

4. (a) Emphasize the role of Iron and Zinc in human nutrition. 5
- (b) Discuss the role of starch degrading enzymes in food industry. 5
- (c) Mention the antinutritional factors present in pulses and legumes. How can they be eliminated? 3+2
5. (a) Discuss the changes occurring in meat on ageing. 5
- (b) What is enzymatic browning? Give the mechanism of it in fruits & vegetables. 2+3
- (c) List physicochemical properties of milk. Name two such properties used to judge freshness of milk and two properties to detect adulteration of milk with water. 2+3
6. (a) What do you understand by 'basic diet' ? What is meant by RDA? What is RDA value of calcium and protein for pregnant woman ? 2+1+2
- (b) What is PER ? Give its significance and method of calculation in food. 1+4
- (c) What are the advantages of dietary fibers in food ? Mention few sources of dietary fibers. 3+2
7. Write short notes on any four : 4x2.5=10
- (a) Gluten
- (b) Composition of milk.
- (c) Heavy metals.
- (d) Essential fatty acids.
- (e) Non starchy polysaccharides.
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