

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

Term-End Examination

June, 2012

MFT-001 : FOOD CHEMISTRY AND NUTRITION

Time : 3 hours

Maximum Marks : 70

*Note : Attempt Two subsections from questions 1 - 6 and
Question no. 7 is compulsory.*

1. (a) Explain the classification of carbohydrates. 10
What are invert sugars and non - calorific
sweetness ?
- (b) What are the conjugated proteins ? Explain
with examples what are essential
aminoacids ?
- (c) Give a brief account of emulsification
lipolysis and solubilization of dietary fats ?
2. (a) Describe the process of hydrogenation of 10
fats. Why the hydrogenated fat is not
considered good for health ?
- (b) Explain the role of vitamin A in vision.
What are the active forms of vitamin A ?
- (c) What are the metabolic functions of the
flavin coenzymes ?

3. (a) Discuss briefly the functions, dietary sources and RDA of calcium. 10
- (b) Explain how you would estimate the iron content of a solid food sample ?
- (c) Write a brief note on the de - naturation of proteins.
4. (a) What are the effects of processing on the pigments of fruits and vegetables ? 10
- (b) Describe the general structure of cereal grains with illustration.
- (c) What are the major functions of dietary proteins ? List the food sources of proteins.
5. (a) Describe the role of dietary fiber in the digestion. Explain antinutritional factors with examples. 10
- (b) Give a brief account of the digestion of carbohydrates.
- (c) Describe the influence of heat treatment on milk proteins.
6. (a) Describe iodine deficiency disorders. How can we overcome iodine deficiency ? 10
- (b) Discuss the importance of antioxidants in health.
- (c) Explain the role of enzymes in food processing.

7. Write short notes on *any four* of the following : 10

- (a) Trans fatty acids.
 - (b) Cholesterol and health.
 - (c) Amphoterism of proteins.
 - (d) Antibiotic residues in Food.
 - (e) Preparation of soy protein concentrate.
 - (f) Bioavailability of dietary iron.
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