

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)****Term-End Examination****December, 2013****MFN-002 : NUTRITIONAL BIOCHEMISTRY***Time : 2½ hours**Maximum Marks : 75*

Note : Attempt any five questions. All questions carry equal marks.

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1. (a) Write down the different types of monosaccharides found in foods with specific examples. 5
 - (b) What are eicosanoids ? What is their physiological significance ? 5
 - (c) Classify amino acids according to structure with specific examples. 5
 2. (a) Describe the classification of proteins mentioning their characteristics and with specific examples. 10
 - (b) What are the transamination reactions ? Give an example. 5
 3. (a) Describe the structure and properties of vitamin A and related compounds. 10
 - (b) Explain briefly the role of coenzymes in carbohydrate metabolism. 5
 4. (a) Describe how enzymes are classified and sub-classified mentioning specific reactions catalyzed by a class or sub-class. 10

- (b) Briefly describe the Koshland's induced fit model for mechanism of enzyme action. 5
5. (a) Describe pentose phosphate pathway mentioning all the intermediates, enzymes, coenzymes. What is its significance? 10
- (b) Explain the function of LDL and VLDL briefly. 5
6. (a) List the steps involved in the oxidation of fatty acids highlighting the enzymes involved in the process. 10
- (b) List the common inborn errors due to protein metabolism. Explain briefly any one of them. 5
7. Write short notes on **any three** of the following : 5x3=15
- (a) Role of free radical in lipid peroxidation
- (b) Urea cycle
- (c) Cyclic AMP
- (d) Role of hormones produced by pancreas
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