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MFN-002

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination, 2019

MFN-002 : Nutritional Biochemistry

Time : 2½ Hours]

[Maximum Marks : 75

Note : Question No.1 is compulsory. Answer five questions in all . All questions carry equal marks.

1. Answer all the following : [1×15=15]
- (a) What are epimers ? Give example. [15]
 - (b) What are n-3 and n-6 Fatty acids ?
 - (c) Give example of 2 basic amino acid ?
 - (d) What is the coenzyme form of vitamin B₂ ?
 - (e) What is Holoenzyme ?
 - (f) Give examples of group transferring coenzyme.
 - (g) Give the enzymes present in intestine for digestion of food.

- (h) What does alanine transaminase do ?
 - (i) What is the difference between nucleoside and nucleotide?
 - (j) What are antioxidant ? Give one example.
 - (k) What are micro minerals ? Explain with examples.
 - (l) Give examples of Gr-II hormones.
 - (m) Give role of Pyruvate dehydrogenase complex in TCA cycle.
 - (n) Which enzyme is defective in Tay Sach's disease ?
 - (o) How many ATPs are produced in complete oxidation of 18:1 Fatty acids ?
2. (a) Give the test to distinguish between reducing and nonreducing sugar. [2]
- (b) What is gluconeogenesis ? Give the reactions of gluconeogenesis which are not reversed in Glycolysis. [5]

- (c) Give Functions of TCA cycle. [5]
- (d) How cellulose is different from glycogen ? [3]
3. (a) What are sphingo phospholipids ? Give its uses. [3]
- (b) Define Saponification. [2]
- (c) Give steps for β oxidation of monounsaturated fatty acid. [5]
- (d) What are the ways by which cholesterol is metabolised in the Liver.
4. (a) What are critical features of double stranded DNA ? [3]
- (b) Give difference between secondary and tertiary structure of protein. [2]
- (c) How transamination is different from oxidative deamination ? Explain with examples. [5]
- (d) Give steps involved in synthesis of uric acid. [5]

5. (a) Give defective enzyme and beneficial therapy in following diseases : [6]
- (a) Phenylketoneurea
- (b) Fructosurea
- (b) Write short note on Thalasemia. [4]
- (c) Describe the natural and diet derived antioxidant in context of their role in the body. [5]
6. (a) What is enzyme inhibition ? Give its different ways. [10]
- (b) What are isozymes ? How many isozymes of LDH are known ? Give their role. [5]
7. (a) Give functions of magnesium. [5]
- (b) Give mechanism of action of Group-II hormones. [5]
- (c) How Lipids are digested in our body ? [5]

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