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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 : Answer **four** questions in all. Question **no. 1** is **compulsory.**

1. Answer following questions briefly :

(a) Define mutarotation. [2]

(b) What is oxidative rancidity ? [2]

(c) What are amphoteric amino acids ? [2]

(d) Give coenzyme form of Riboflavin. [2]

(e) Define enzymes. [2]

(f) What are antioxidant ? Give examples. [2]

(g) Give two important functions of Zinc. [2]

(h) Give two examples of glycogen storage diseases. [2]

2. (a) Differentiate between competitive and non-competitive enzyme inhibition. [5x4=20]

(b) Give role of pancreas in digestion.

(c) What are the end products of purine degradation and diseases caused due to its accumulation ?

(d) How proteins are classified into different level of organisation ?

3. (a) Give function of TCA cycle. [4x5=20]

(b) What is Gluconeogenesis ? Give its significance with two examples.

(c) Give 3 irrversible reaction of glycolysis.

(d) Give role of carnitine in transfer of fatty acids and enzymes involved for transfer.

(e) Write short note on Lipoproteins.

4. (a) Enumerate the process of generation of free radicals. [4x5=20]

(b) How are fat soluble vitamins transported ?

(c) Give role of calcium in the body.

(d) Describe the role of Insulin in carbohydrate metabolism.

(e) Name the defective enzyme is following diseases :

(i) Homocystinuria

(ii) Argininemia

(iii) Histidinemia

(iv) MSUD

5. (a) How Thalasemia differs from sickle cell anaemia ? [5]

(b) What is urea cycle ? Explain giving the reactions with the enzymes involved. [10]

(c) Explain briefly the role of group I hormones. [5]

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