

March 2009

[KU 150]

Sub. Code: 2045

M.D. DEGREE EXAMINATION

Branch XIII – BIOCHEMISTRY
(Common to all Candidates)

**Paper III – INTERMEDIARY METABOLISM, MACRO AND
MICRO NUTRIENTS AND INBORN ERRORS OF METABOLISM**

Q.P. Code : 202045

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary

Answer ALL questions

I. Essay questions : (2 x 20 = 40)

1. Describe the digestion and absorption of lipids and lipid soluble vitamins.
2. Discuss in detail the homeostasis of blood glucose.

II. Write short notes on : (10 x 6 = 60)

1. Metabolic syndrome.
2. Phenylketonuria.
3. Classes and functions of apoproteins.
4. Hyperuricemias.
5. Proteins of muscle contraction.
6. Biological antioxidants.
7. Regulation of calcium.
8. Sulfur containing vitamins.
9. Ketogenesis.
10. Iodine and fluorine.

September 2009

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Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary

Answer ALL questions

I. Essay questions : (2 x 20 = 40)

1. Describe the antineuritic vitamins, biological reactions in the metabolism and their deficiency disorders.
2. Describe the general reactions of catabolism of amino acids.

II. Write short notes on : (10 x 6 = 60)

1. Ketogenesis.
2. Metabolism in erythrocytes.
3. Purine salvage pathway.
4. Proteins of muscle contraction.
5. Disorders of Ion metabolism.
6. Biotransformation.
7. Components of respiratory chain.
8. Metabolism of fructose.
9. Conjugated proteins.
10. Mitochondrial diseases.

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Maximum : 100 marks

Draw suitable diagram wherever necessary

Answer ALL questions

I. Essay questions : (2 x 20 = 40)

1. Describe the metabolic alterations occurring in starvation. How do hormones help in adaptation during starvation?
2. Explain the various mechanisms of regulation of enzymes in the body.

II. Write short notes on : (10 x 6 = 60)

1. Role of copper in health and disease.
2. Free radicals – formation and elimination.
3. Methemoglobinemias.
4. Refsum's disease.
5. Role of pyridoxine in the body.
6. Metabolism of methionine.
7. Functional importance of glycine.
8. Porphyrins - causes and lab diagnosis.
9. Ethanol metabolism.
10. Coagulation of blood.
