

M.D. DEGREE EXAMINATION**BRANCH XIII – BIOCHEMISTRY****PAPER III – INTERMEDIARY METABOLISM, MACRO AND MICRO
NUTRIENTS AND INBORN ERRORS OF METABOLISM***Q.P.Code: 202045***Time: Three Hours****Maximum: 100 Marks****I. Essay Questions:****(2 x 15 = 30)**

1. Discuss in detail the synthesis and regulation of Heme. Add a note on Hepatic Porphyrias.
2. Name the aromatic amino acids. Discuss in detail the metabolism and specialized products formed from Tryptophan.

II. Short notes:**(10 x 5 = 50)**

1. Metabolism and clinical significance of High Density Lipoprotein.
2. Anti-oxidant Vitamins and their significance.
3. One Carbon Metabolism.
4. Oxygenases and their importance.
5. Iron toxicity.
6. Synthesis of ketone bodies and its regulation.
7. Metabolic disorders of Sulfur containing Aminoacids.
8. Carnitine transport and its significance.
9. Regulation of blood calcium.
10. Non – ketotic Hyperglycinemia.

III. Reasoning Out:**(4 x 5 = 20)**

1. Vitamin A deficiency has a more severe effect on Thyroid Hormone function.
2. Substrate cycle allows the fine tuning and rapid response of metabolism.
3. Glutamine analogs block the Purine nucleotide biosynthesis.
4. Acyl-CoA plays a dual role in Thermogenesis of Brown adipose tissue.
