

[LQ 150]

AUGUST 2020
(MAY 2020 SESSION)

Sub. Code: 2045

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 sources, biochemical function, metabolism, recommended dietary allowances, deficiency manifestations and toxicity symptoms of Calcium
2. Discuss in detail the regulation of blood glucose levels.

II. Short notes:

(10 x 5 = 50)

1. Explain the mechanism of enzyme catalysis.
2. Antioxidant vitamins and their clinical significance
3. Clinical and biochemical aspects of mitochondrial diseases.
4. Briefly explain the mechanism of free radical damage.
5. Role of Cytochrome P450 species.
6. Explain the mechanism of activation of platelets.
7. Describe in brief the metabolic functions of adipose tissue.
8. Metabolism of alcohol and its effects on liver function.
9. Explain the process of dissolution of fibrin clot
10. Metabolic functions of Kidney

III. Reasoning Out:

(4 x 5 = 20)

1. Explain the role of minerals as prosthetic group of enzymes.
2. Compartmentation of metabolic pathways.
3. Atherogenic nature of Lp(a).
4. Physical and biochemical changes associated with oxygenation of Hemoglobin.
