

QP Code:103103

Reg. No.:.....

**PG Degree Supplementary Examinations in Biochemistry (MD)  
November 2021**

**Paper III – Nutrition and Metabolism**

**Time: 3 hrs**

**Max marks:100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essay:**

**(20)**

1. Catabolism of phenylalanine and tyrosine and their associated inborn errors of metabolism. Write the steps of synthesis of any three biologically important compounds derived from tyrosine and mention their significance

**Short essays:**

**(8x10=80)**

2. Source, biochemical functions, recommended dietary allowance (RDA) and deficiency manifestations of thiamine
3. Digestion and absorption of carbohydrates. Add a note on the disorders associated with it.
4. Explain the detoxification of following compounds
  - Aspirin
  - Ethyl alcohol
  - Bilirubin
  - Barbiturates
5. Define balanced diet. How do you prepare a diet for a healthy young adult man of sedentary habits weighing 70 kgs and height of 180 cms
6. Explain the synthesis of heme and its regulation. Describe biochemical changes in hepatocellular jaundice and obstructive jaundice
7. Dietary fibres, examples with their biochemical importance. Add a note on nutritional importance of proteins and lipids
8. Explain the mechanisms of muscle contraction and the role of Contractile proteins
9. Micro elements, examples with their biochemical functions

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