

QP Code:103103

Reg. No.:.....

**PG Degree Supplementary Examinations in Biochemistry (MD)
April 2026**

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. What is an inborn error of metabolism. Write the biochemical abnormalities and signs of inborn errors associated with porphyria metabolism

Short essays: (8x10=80)

2. Describe in detail glycogen metabolism and its reciprocal regulation.
3. Discuss different types, regulation of oxidation of lipids including associated disorders
4. Name free radicals and markers of oxidative stress. What are various methods to estimate oxidative stress
5. What are the metabolic fate of Tryptophan. Enumerate formation of specialised products from Tryptophan and their function. Write a note on associated disorders.
6. Write in detail the sources, RDA, biochemical functions and deficiency manifestations of Folic acid. Add a note on Folate antagonists.
7. Describe in detail pyrimidine metabolism. Write briefly on interrelationship between salvage pathway and denovo synthesis of pyrimidine nucleotides
8. What is detoxification. Write in detail various mechanisms of detoxification. Discuss the role of Cytochrome P450 in Detoxification.
9. Describe the methods of assessment of nutritional quality of protein. Add a note on protein energy malnutrition
