

QP CODE: 211020

Reg. No:

**Second Year B.Sc Medical Biochemistry Degree Regular/Supplementary
Examinations February 2023
Paper VI - Metabolism 1**

(Carbohydrate, Lipid & Amino Acid Metabolism)

(2016 Scheme)

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*

Long Essays

(2x15=30)

1. Give an account of cholesterol biosynthesis. How is it regulated and mention its function. Add a note on the significance plasma cholesterol estimation
2. Write an essay on the biosynthesis of urea how is regulated. Add a note on the clinical significance of uremia

Short Essays

(2x10=20)

3. Describe the metabolic pathways of Tryptophan. Name the biologically important substances produced from Tryptophan. Write briefly on the biochemical role of Serotonin.
4. Identify the steps of in Kreb's cycle where high energy electrons are generated Write the detailed essay on how these electrons are processed via the respiratory chain finally yielding ATP.

Short Answer

(6x5=30)

5. Source and fate of Acetyl Co A.
6. Carnitine shuttle.
7. One carbon metabolism.
8. Regulation of glycogen synthesis and break down by covalent modification.
9. Dynamics and synthesis of pentose phosphate pathway.
10. Homocystinuria.

Comment on

(10x2=20)

11. P: O ratio.
12. Chemiosmotic theory.
13. Role of Bile acids in digestion.
14. Glucose transportation.
15. Carnitine.
16. Von Gierke's disease.
17. Essential Amino acid.
18. Gall stones.
19. Alkaptonuria.
20. FIGLU.
