

QP CODE: 211020

Reg. No: .....

**Second Year B.Sc Medical Biochemistry Degree Regular/Supplementary  
Examinations July 2021  
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. Describe the Ketone body metabolism. Add a note on biochemical basis of starvation ketoacidosis
2. Describe in detail formation, transport and detoxification of ammonia. Add a note on Urea cycle disorders.

**Short Essays**

**(2x10=20)**

3. Describe the steps involved in glycogenolysis. Add a note on biochemical basis on Von Gierke's Disease.
4. Describe Chemiosmotic theory of ATP synthesis with diagram.

**Short Answer**

**(6x5=30)**

5. Digestion and absorption of carbohydrates
6. Specialised products of Glycine
7. Significance of Hexose Monophosphate Shunt (HMP shunt) pathway
8. Amphibolic nature of citric acid cycle
9. Shuttles for transport of reducing equivalents across mitochondrial membranes
10. Fatty acid synthase complex

**Comment on**

**(10x2=20)**

11. Anaplerotic reactions of citric acid cycle
12. Alkaptonuria
13. Micelles
14. Essential fatty acids
15. Galactosemia
16. P: O ratio
17. Lipotropic factors
18. Fate of pyruvate
19. Cori's cycle
20. Glucose transporters

\*\*\*\*\*