

QP Code : 102383

Reg . No.....

**First Year M.Sc. MLT Degree Examinations – November 2015  
(Biochemistry)**

PAPER – II ENZYMOLOGY, METABOLISM AND INBORN ERRORS OF METABOLISM

**Time : 3 hrs.**

**Max. marks : 100**

- *Answer all questions*
- *Draw diagrams wherever necessary*

**Essays:**

**(10x10 = 100)**

1. Discuss briefly biochemical importance of glycine. Explain the reaction and the importance of the following : decarboxylation of amino acid, transamination and transmethylation . (6+4)
2. What is gluconeogenesis. Describe the pathway of gluconeogenesis from alanine. Mention the key enzymes and explain how they are regulated. (1+5+4)
3. Describe various components of electron transport chain with the help of a diagram and indicate the sites of ATP formation. Name two inhibitors and two uncouplers of oxidative phosphorylation. (6+2+2)
4. Outline the steps of beta oxidation of palmitic acid. Add a note on its energetics and regulation. (6+2+2)
5. Explain the catabolism of purine nucleotides. Add a note on any two disorders associated with purine metabolism. (6+4)
6. Outline the steps of citric acid cycle. Explain the catabolic and anabolic role of this cycle. (6+4)
7. Discuss two theories put forward to explain mechanisms of enzyme action. Add a note on applications of enzymes. (6+4)
8. Explain how urea is synthesized in liver. Why is this process important. Add a note on the reference value of blood urea. (6+2+2)
9. Explain CSF analysis and porphyrias (5+5)
10. Screening of fetal lung maturity and phenyl ketonuria (5+5)

\*\*\*\*\*