



Code No. : 9266

**FACULTY OF SCIENCE**  
**M.Sc. II Semester Examination, May/June 2012**  
**BIOCHEMISTRY**  
**Paper – I : Intermediary Metabolism**

Time: 3 Hours]

[Max. Marks : 80

**Note : Answer all questions.**

**PART – A**

**(8×4=32 Marks)**

1. Write a note on reactions and significance of pentose phosphate pathway.
2. Discuss the reaction of glyoxylate path way.
3. Explain gamma glutamate cycle and its significance.
4. Give an account of the utilization of nitrate and ammonia.
5. Explain the biosynthesis of phospholipids.
6. Explain how lipids acts as energy reserves.
7. Discuss the synthesis of thymidilate.
8. Write a note on the biomedical importance of nucleotide analogues.

**PART – B**

**(4×12=48 Marks)**

9. a) Explain the events of glycolysis. Add a note on the energetics.  
OR  
b) Explain the biosynthesis of glycogen. Add a note on glycogenolysis.
10. a) Give an account of nitrogen cycle and biological nitrogen fixation.  
OR  
b) Explain the biosynthesis and degradation of Heme.
11. a) Discuss the events of the biosynthesis and elongation of fatty acids.  
OR  
b) Write a note on prostaglandins, Thromboxane's and leukotriens.
12. a) Give an account of the biosynthesis and degradation of purine nucleotides.  
OR  
b) Explain the role of nucleotides as metabolic regulators. Add a note on disorders associated with purine nucleotides.