



Code No. : 624

**FACULTY OF SCIENCE**  
**M.Sc. II Semester Examination, April/May 2013**  
**BIOCHEMISTRY**  
**Paper – I : Intermediary Metabolism**

Time : 3 Hours]

[Max. Marks : 80

**Note** : Answer all the following questions.

SECTION – A

(8×4=32 Marks)

- ✓ 1. Explain the by-pass reactions of gluconeogenesis.
- ✓ 2. Explain the Pasteur effect.
- ✓ 3. List out the essential amino acids indicating their structures and significance.
4. Explain the nitrogen cycle and its significance.
5. Sketch the biosynthesis of triacyl glycerols in adipose tissue.
- ✓ 6. List out the bile acids indicating their structures and significance. How are they synthesized ?
- ✓ 7. Explain the thymidylate synthesis.
- ✓ 8. Discuss the degradation of pyrimidine nucleotides.

SECTION – B

(4×12=48 Marks)

9. Discuss the Pentose-Phosphate pathway and its physiological significance.

OR

Write short notes on (a) Glucuronic acid cycle and (b) Glycogenolysis.



10. Sketch the biosynthesis of branched chain amino acids.

OR

Discuss the urea cycle, its regulation and significance.

11. Discuss the biosynthesis of cholesterol and its regulation.

OR

Write short notes on (a) Prostaglandins and (b) Fatty acid desaturation.

12. Discuss the biosynthesis of pyrimidine nucleotides and their regulation of synthesis.

OR

✓ Enumerate the sequence of reactions involved in Purine degradation and the metabolic disorders associated with it.

20/12/23  
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