

FACULTY OF SCIENCE

B.Sc. II – Year Examination, March / April 2015

Subject: Biochemistry

Paper – II

Metabolism and Biochemical Techniques

Time: 3 Hours

Max.Marks: 100

PART – A (8x5 = 40 Marks)

Answer any EIGHT questions from the following.

- 1 Standard reduction potential
- 2 Inhibitors of respiratory chain
- 3 Reaction oxygen species
- 4 Fate of pyruvate
- 5 Pasteur effect
- 6 Elongation of fatty acids
- 7 Glycogenic amino acids
- 8 Albenism
- 9 Transamination
- 10 Principle and application of TLC
- 11 Beer-Lamberts law
- 12 Isotopes in biology

PART – B (4x15 = 60 Marks)

Answer ALL Questions.

13 a) Explain the theories put forward to understand oxidative phosphorylation. Add a note on F_0F_1 -ATPase.

OR

b) Write short notes on:

a) Standard reduction potential

b) Redox couplers

14 a) Describe in brief the pentose-phosphate pathway.

OR

b) Write short notes on:

1) Catabolism of unsaturated fatty acids

2) Regulation of cholesterol biosynthesis

15 a) Explain the catabolism of carbon skeleton of amino acids and give classification of glycogenic and ketogenic amino acids.

OR

b) Explain the biosynthesis and degradation of heme.

16 a) Write short notes on:

i) Application of affinity chromatography

b) Ion exchangers

OR

b) Write the principle, instrumentation and applications of spectrophotometry.
