1209-14-488-009

Code No. 2049

FACULTY OF SCIENCE

B.Sc. II – Year Examination, March / April 2016

Subject : BIOCHEMISTRY

Paper – II : Metabolism and Biochemical Techniques

Time : 3 hours **Max. Marks : 100**

Part – A (8 X 5 = 40 Marks)

(Short Answer Type)

Note : Answer any Eight from the following.

1 Chemiosmotic theory
2 Substrate level phosphorylation
3 Biological oxidations
4 Light reactions of photosynthesis
5 Anaplerotic reactions
6 Brief outline of the biosynthesis of triacylglycerol
7 Decarboxylation and deamination reactions of amino acids
8 Gout
9 In born errors of branched chain amino acids
10 Centrifugation techniques
11 Tracer techniques
12 Ion exchange chromatogrpahy

Part – B (4 X 15 = 60 Marks)

(Essay Answer Type)

Note : Answer all the questions.

13 a) Describe the ultrastructure of mitochondria and explain the electron transport mechanism.

OR

b) Write about energy transformations, free energy concept and phosphate group transfer potential.

14 a) Explain citric acid cycle. Comment on the fate of pyruvate.

OR

b) Explain the biosynthesis of cholesterol. Write about role of microsomes in fatty acid metabolism.

15 a) Discuss the metabolic fate of glycine, serine and methionine.

OR

b) Explain the de novo biosynthesis of puirnes. Write down the cause for Lesch-Nyhan syndrome.

16 a) Give an account of principle and methodology of gel filtration, paper and affinity chromatographic methods.

OR

b) Explain the Beer – Lamber law, principle and methods of colotimetry and spectrophotometry.

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