TKN/KS/16 – 5927

Sixth Semester B. Sc Examination

BIOCHEMISTRY

Paper – I

(Metabolism – II)

Time : Three Hours] [Max. Marks : 50

N. B. : All questions are compulsory and carry equal marks.

1. Describe in detail, the activation, entry and β–oxidation of palmitic acid in mitochondria. 10

OR

(a) Name the products of oxidative phase of HMP pathway and how are they formed. 5

(b) Describe the β–oxidation of odd carbon fatty acid. 5

2. Write notes on :—

(a) Fatty acid synthase complex. 5

(b) Biosynthesis of Triglycerides.

OR

(c) Transport of AcetylcoA from mitochondria into the cytoplasm. 5

(d) Mitochondrial fatty acid chain elongation. 5

3. Describe in detail Urea Cycle. 10

OR

Write notes on :—

(a) Transamination. 5

(b) Decarboxylation. 5

4. Describe the De novo pathway of Biosynthesis of pyrimidine nucleotides. 10

OR

Write notes on :—

(a) Conversion of ribonucleotide to deoxyribonucleotide. 5

(b) Salvage pathway of pyrimidine nucleotides. 5

5. Answer any **Ten** :—

(i) How many ATPs will be formed when stearic acid is completely oxidized ? 1

(ii) Name the enzymes catalyzing the reactions of non–oxidative phase of HMP shunt. 1

(iii) How many ATPs will be formed on oxidation of linoleic acid ? 1

(iv) Name one enzyme required for synthesis of unsaturated fatty acid. 1

(v) Name two ketone bodies. 1

(vi) Write the structure of phosphatidyl ethanolamine. 1

(vii) Name two glycogenic amino acids. 1

(viii) Name two disorders of Urea cycle. 1

(ix) Name the compound which is common to Urea cycle and TCA cycle. 1

(x) Name the product of purine nucleotide catabolism. 1

(xi) What is the main difference between de Novo biosynthesis of purine nucleotides and pyrimidine nucleotides ? 1

(xii) Name one cyclic nucleotide other than CAMP. 1