

Exam. Code : 107404

Subject Code : 2303

B.Sc. (Bio Technology) 4th Semester

**BIOCHEMISTRY-IV**

**Paper-BT-3**

Time Allowed—3 Hours] [Maximum Marks—40

**SECTION-A**

**Note** :— Attempt all questions. Each question carries 1 mark.

1. Where in the cell synthesis and degradation of Fatty acid takes place ?
2. What is the fate of glycerol in degradation of Triacylglycerol ?
3. What is the role of Carnitine in Fatty acid oxidation ?
4. What are ketone bodies ?
5. Explain briefly what are ketogenic amino acids
6. Draw the structure of any one aromatic amino acid.
7. Draw the structure of pyrimidine ring and identify the sources which provide the different atoms of pyrimidine.
8. Differentiate between Adenine and Adenosine.

**SECTION-B**

**Note** :— Attempt any **five** questions, each question carries **4** marks.

1. Explain Urea Cycle and indicate the reactions occurring in cytosol and mitochondria.
2. What are Transamination reaction ? Explain its importance in amino acid degradation.
3. Describe Salvage Pathway of nucleotides.
4. Explain the regulation of biosynthesis of Purine and Pyrimidine bases.
5. Draw a well labelled diagram and write reactions how fatty acids are transported to mitochondria from cytosol for oxidation.
6. Write a note on regulation of Lipid metabolism.
7. Explain the role of lipoproteins in regulating Cholesterol levels in the body.
8. Explain the degradation of Triacylglycerol.

**SECTION-C**

**Note** :—Attempt any **two** questions, each question carries **6** marks.

1. Write a note on biosynthesis of essential amino acids. Briefly explain its regulation.

2. Discuss the biosynthesis of Purine and Pyrimidine bases.
3. Explain different steps in degradation of saturated Fatty acids. How is it different from degradation of unsaturated fatty acid ?
4. Explain biosynthesis of Cholesterol.