

Exam. Code : 107403

Subject Code : 1731

B.Sc. Biotechnology 3rd Semester (Batch 2020-23)

BIOCHEMISTRY-III

(Metabolism of Carbohydrates and Lipids)

Paper : BTL-205

Time Allowed—3 Hours] [Maximum Marks—40

Note :—Attempt FIVE questions in all, selecting at least ONE question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION-A

1. (a) Discuss the reactions of gluconeogenesis which are different from reversal of glycolysis. 5
- (b) How fructose enters glycolytic pathway in liver and muscle ? 3
2. Describe in detail the process of glycolysis. Give its energetics. 8

SECTION-B

3. Write a note on Electron Transport Chain and its significance. 8
4. (a) Write those reactions of kreb cycle where NADH is produced ? 4
- (b) Explain the term amphibolic nature of kreb cycle ? 4

SECTION-C

5. Write a note on degradation of Triacylglycerols. 8
6. (a) Write the names and function of additional enzymes required for oxidation of unsaturated fatty acids. 4
- (b) Discuss the regulation of lipid metabolism. 4

SECTION-D

7. Write a note on synthesis of fatty acids. 8
8. Briefly discuss the biosynthesis of :
 - (a) Phosphoglycerides 4
 - (b) Sphingolipids 4