

2124
B.A./B.Sc. (General) Third Semester
Biochemistry
Paper - A: Carbohydrates and Lipid Metabolism

Max. Marks: 45

Time allowed: 3 Hours

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.
x-x-x

I. (a). Explain briefly the following:-

- i) Alcoholic fermentation
- ii) Gluconeogenesis
- iii) ω -oxidation of FAs
- iv) Lipoxins

(4x2)

(b) Give the reaction catalyzed by fatty acid desaturase

(1)

UNIT - I

II. a) Explain the metabolism of Fructose in liver.

b) Give the components of pyruvate dehydrogenase complex.

(6,3)

III. Describe the pentose phosphate pathway along with its significance.

(9)

UNIT - II

IV. a) Give an account of glyoxylate pathway.

b) Explain the role of de-branching enzyme during glycogenolysis.

(6,3)

V. a) Explain the biosynthesis of starch.

b) Give an overview of Cori cycle.

(5,4)

UNIT - III

VI. Explain the β -oxidation of heptadecanoic acid.

(9)

VII. Describe the biosynthesis of palmitic acid by FAS I.

(9)

UNIT - IV

VIII. a) Explain the biosynthesis prostaglandin and thromboxanes.

b) Discuss the process of mobilization of fats from adipose tissue.

(5,4)

IX. a) Explain the biosynthesis of gangliosides.

b) Give the reactions for biosynthesis of isoprene units from mevalonate.

x-x-x

(5,4)