Roll No. ..... **Total No. of Pages : 2**

PC 11691-NH

AS/2111

BIOCHEMISTRY METABOLISM—BTHB-1101T

Semester–I

Time Allowed : Three Hours] [Maximum Marks : 74

Note :- Attempt *two* questions each from Section A and B. Section C is compulsory.

SECTION—A

1. Give a brief account on various types of carbohydrates. Mention their important functions. 11

2. (a) Write down a note on different level of structural organization of proteins. 8

   (b) Brief note on the forces stabilizing proteins shapes. 3

3. Differentiate between lipids and fats. Give a brief account of structure and nomenclature of fatty acids. 11

4. (a) What are the various forces responsible for DNA structure ? Elaborate. 5

   (b) Draw the structure double helix model of DNA structure and elaborate the Chargaff rule. 6

SECTION—B

5. Derive Michaelis-Menten equation. Discuss its significance. 11

6. Elaborate the various factors in details affecting the enzyme activity. 11

7. Give a brief account of conversion of glucose to pyruvic acid and calculate the carbohydrates utilized in Glycolysis. 11

8. Discuss in detail the tricarboxylic acid cycle. 11

SECTION—C

9. Explain the following :-

   (i) Amino acid

   (ii) Examples of quaternary proteins

   (iii) Globular Proteins

   (iv) Glycoproteins

   (v) Mucopolysaccharides

   (vi) DNA denaturation

   (vii) Storage lipids

   (viii) Glycolipids

   (ix) Cholesterol

   (x) Waxes

   (xi) Enzyme kinetics

   (xii) Iso enzymes

   (xiii) Cori cycle

   (xiv) Glycogenolysis

   (xv) Gluconeogenesis 15×2=30