2020

FOOD AND NUTRITION (Honours)

Paper : FNTH - DC - 5

(Biochemistry)

(CBCS)

Full Marks : 25 Time : Two Hours

The figures in the margin indicate full marks.

Instruction to students for Page Limitation

For **all one (01) mark** questions, students should answer within **1 page of an A4 paper;** for **each five marks (05)** question : **Max. 1 page of an A4 paper** (including figure / diagram, if any) and for 10 marks (10) question : **Max. 2½ page** of an A4 paper (including figure / diagram, if any), should be used.

1. Answer any *five* of the following : 1×5=5

   (a) What is the composition of sucrose?

   (b) What is Fructosan? Give an example.

   (c) What do you mean by denatured proteins?

   (d) Define Protein Efficiency Ratio (PER)?

   (e) Which transport mechanism helps in lipid absorption into the mucosal cells?

   (f) What do you mean by PUFA?

   (g) Mention the final product of glycolysis in anaerobic condition.

   (h) What do you mean by transamination?

2. Answer any *two* of the following : 5×2=10

(a) What are the consequences of essential amino acid deficiency in protein synthesis? Explain the secondary structure of protein with suitable diagram. 2+3

(b) How temperature and pH affect the catalytic activity of an enzyme? What do you mean by enzyme inhibition? 3+2

(c) What is citric acid cycle? Schematically present the steps of citric acid cycle. 1+4

3. Answer any *one* of the following : 10×1=10

(a) Illustrate the gluconeogenesis pathway with suitable diagram. Differentiate between gluconeogenesis and glycolysis. 7+3

(b) What is allosteric enzyme? Differentiate between coenzyme and cofactor. Classify enzyme based on catalytic activity. 2+2+6