

ROLL No.....

NATIONAL COUNCIL FOR HOTEL MANAGEMENT
AND CATERING TECHNOLOGY, NOIDA
ACADEMIC YEAR – 2016-2017

COURSE : 1st Semester of Post Graduate Diploma in
Dietetics & Hospital Food Service
SUBJECT : Applied Bio-Chemistry
TIME ALLOWED : 02 Hours MAX. MARKS: 50

(Marks allotted to each question are given in brackets)

- Q.1. (a) How many amino acids are found in proteins? Name **any five** of them.
(b) What is transamination reaction? Explain it with the help of example.
(c) Give the name of coenzyme involved in transamination reaction and how it helps in the reaction?
(3+5+2=10)

- Q.2. **A** Give an example of each:
(i) Non-reducing disaccharide
(ii) A coenzyme involved in oxidation reduction reactions
(iii) A hormone involved in calcium homeostasis
(iv) End product of glycolysis during vigorous exercise
(v) An enzyme involved in cholesterol biosynthesis
- B** State True or False:
(i) Glucose and Galactose are epimers of each other.
(ii) Stearic acid is an unsaturated fatty acid.
(iii) Glycine is an optically active amino acid.
(iv) Insulin is a peptide hormone.
(v) Lipogenesis and β -oxidation are simply reversal of each other.
(5+5=10)

- Q.3. Define steps of β -oxidation.

OR

How the synthesis of glycogen occur beginning from glucose?

(5)

Q.4. How are enzymes classified according to international union of bio-chemistry and molecular biology (IUBMB)?

OR

Enumerate **five** main steps involved in cholesterol biosynthesis.

(5)

Q.5. Define structure of following (**any two**):

- (a) Lactose
- (b) Phenylalanine
- (c) Glycogen
- (d) Cholesterol

(2x 2 ½ =5)

Q.6. How blood glucose levels are regulated in the body?

(5)

Q.7. What are Ketone bodies? How are these produced? Name **three** ketone bodies.

(5)

Q.8. Write short notes:

- (a) Essential fatty acid
- (b) Coenzymes

(2 ½ + 2 ½ =5)

OR

What do you understand by the hormonal cascade system? Give the general sequence of events in the hormonal cascade system.

(5)
