

NATIONAL COUNCIL FOR HOTEL MANAGEMENT  
AND CATERING TECHNOLOGY, NOIDA  
**ACADEMIC YEAR – 2015-2016**

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

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(Marks allotted to each question are given in brackets)

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Q.1. What are hormones? Classify them according to their mechanism of action. (10)

Q.2. Discuss the mechanism of metabolic fuel supply in fed state. (10)

Q.3. Define enzymes and write their specific characteristics.  
**OR**  
How steroid hormones carry messages between tissues? (5)

Q.4. Draw the complete cycle of glycolysis.  
**OR**  
Draw the breakdown cycle of glycogen to glucose. (5)

Q.5. Write short notes on following:  
(a) Ammonia is toxic to animals.  
(b) Mobilization of stored triacylglycerols in adipose tissue. (2 ½ + 2 ½ =5)

**OR**  
What is coenzyme form of vitamin B5? Write the role of this coenzyme in metabolism. (5)

Q.6. How ketone body formation takes place in human body? (5)

Q.7. Draw the structure of the following:

- (a) Sucrose
- (b) Starch

**OR**

- (a) Cellulose
- (b) Hyaluronic acid

(2 ½ + 2 ½ =5)

Q.8. Define one word for the following:

- (a) An example of a peptide hormone is?
- (b) Which coenzyme involved in carboxyl group transfer?
- (c) During vigorous exercise, what is the end product produced by pyruvate?
- (d) Name the pathway which help in fructose metabolization.
- (e) Name the precursors of lipid biosynthesis.

(5x1=5)

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