2016
(January)

Time : 2 hours

Full Marks : 40

The questions are of equal value.

*Answer any **five** questions.*

(BIOCHEMISTRY)

1. (a) Explain the role of acid and bases in the stability of biomolecules.

   (b) Derive an expression for "Handerson-Hasselbatch Equation".

2. Write short notes on the following :

   (a) Ramachandran Plot

   (b) Peptidoglycans

3. Describe the methods of Protein Sequencing. Add a note on automation of protein sequencing method.

(Turn over)

4. (a) Free energy change for ATP hydrolysis is large and negative. Explain.

   (b) How entropy and enthalpy are related in a biological system ?

5. Differentiate between the following :

   (a) Photophosphorylation and Oxidative Phosphorylation

   (b) Photosystem-I and Photosystem-II

6. What are Carbohydrates ? How are this group of biomolecules are classified ?

7. Write short notes on the following :

   (a) Isomerism of monosaccharides

   (b) Chirality of amino acids

8. Briefly explain the steps involved in pentose phosphate pathway. What is the significance of this pathway.

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