

2015

(January)

Full Marks : **40**

Time : **2 Hours**

*Answer any **five** questions*

All questions carry equal marks

(BIOCHEMISTRY)

1. (a) "Water in an ideal biological solvent" – Justify with the properties of water.
(b) Differentiate between pH and pKa, and deduce the quantitative relationship between them.
 2. Explain the hierarchical organization of protein structure with emphasis on various bonds and chemical interactions on protein functions ?
 3. Write short notes on the following :
(a) Isomerism in monosacharides
(b) Polarity of Lipids.
 4. What is chirality of amino acids ? How chirality of amino acids is responsible for its stereoisomerism.
 5. Differentiate between :
(a) Entropy and Enthalpy
(b) Photophosphorylation and Oxidative phosphorylation.
 6. Briefly explain the steps involved in TCA cycle with emphasis on the role of enzymes and add a note on its energetics.
 7. Write short notes on the following :
(a) Drug detoxification
(b) Water soluble Vitamins.
 8. Differentiate between :
(a) Glycoprotein and Lipoproteins.
(b) Photosystem-I and Photosystem-II.
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