Seat No. : _____

DH-101

December-2013

B.Sc. Sem.-I

Core Course – 3 : Biochemistry Theory

Paper – 101

Time : 3 Hours] **[Max. Marks : 70**

1. (A) Briefly describe the scope and applications of Biochemistry. **14**

OR

(B) (i) Describe Millors experiment. What was he trying to prove ? **7**

(ii) What do you understand by biochemical approach ? **7**

2. (A) What is the difference between configuration and conformation ? Explain with the help of an example. **14**

OR

(B) (i) List the functions of Carbohydrates. **7**

(ii) Explain the oxidation and reduction reactions of sugars. **7**

3. (A) Explain any **7** colour reactions of amino acids. **14**

OR

(B) Give the structure of proline, alanine, tryptophan, methionine, arginine, valine, serine.

4. (A) Explain the various chemical properties of fatty acids. **14**

OR

(B) Explain chemical constants of fat.

5. Each question carries **1** mark. **14**

State true or false. Correct if false.

(i) Glycine has an asymmetric carbon atom.

(ii) All fatty acids have iodine number.

(iii) Oleic acid is a poly unsaturated fatty acid.

(iv) Higher the unsaturation in a fatty acid, lower the melting point.

(v) The central dogma of life is 'Only the best genes survives all adversities'.

Fill in the Blanks :

(vi) Life began on earth approximately _____ year ago.

(vii) Mucic acid test is used to identify _____.

(viii) An important journal of biochemistry is _____.

(ix) Ester is formed when _____ reacts with _____.

(x) All naturally occurring fatty acids have _____configuration.

(xi) What is a coervate droplet ?

(xii) Choose the odd one out : Mannose / Maltose / Fucose / Fructose

(xiii) Give two examples of non-protein amino acids.

(xiv) What is the significance of hydrogenation of fatty acids ?

_____