Sem II CBSGS
Bio-chem-I

March 2015

QP Code : 15926

(3 Hours) [Total Marks : 70

N.B. : (1) **All** questions are **compulsory.**
(2) Write all subquestions of a main question together.

1. Answer the following.
   (a) Draw structure of sucrose by Haworth Projection. 1
   (b) Draw structure of β-D Galactose by using Haworth Projection. 1
   (c) Draw structure of D-Ribose by using Fisher Projection. 1
   (d) Draw the structure of any one sulfur containing amino acid with 3 letter code. 1
   (e) Give name and structure of an acidic amino acid. 1
   (f) Draw structure of Spingomyelin. 1
   (g) Explain the effect of Temperature and pH on enzyme activity. 2
   (h) What is irrversible enzyme inhibition? 2
   (i) Give name of drug inhibit to acetyl cholinesterase. 1
   (j) Define positive feedback inhibition in regulation of enzyme activity. 1
   (k) Name a water soluble vitamin synthesized by bacteria. 1
   (l) Justify Vitamin D as a hormone. 1
   (m) Explain Anabolism. 1

2. (a) Write note on Tertiary structure of poteins. 3
   (b) Explain compitative enzyme inhibition: 3
   (c) Discuss ATP as energy carrier. 3
   (d) Enimerate salient features of digestion and absorption of carbohydrates. 2

3. (a) Write note on mutarotation phenomenon in saccharide. 3
   (b) Write short note on Vitamin D or Vitamin K. 3
   (c) Explain post translation modifcation. 2
   (d) Write note on biological role of Ascorbic acid. 2
   (e) Write role of adipose tissue in digestion and absorptio. 1

4. (a) Classify amino acids based on their side chain properties and give one example of an amino acid (structure not necessary) of each class. 3
   (b) Write note on Glycolipids OR Lipoproteins 3
   (c) Write note on Pantothenic acid OR Riboflavin. 2
   (d) Explain Laws of thermodynamics.

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5. (a) Write note on Starch. 3
   (b) Derive Michaelis-Menten equation and state it's importance. 3
   (c) Write note on Biotin. 3
   (d) Explain thermodynamically favorable reaction. 2

6. (a) Write note on Glycoproteins. 2
   (b) Give examples of drugs that inhibit the following two enzyme and their clinical significance. 2
      (i) Cyclo oxygenase
      (ii) HIV protease
   (c) Discuss compartmentalization of enzyme. 2
   (d) Write short note on Thiamine. 3
   (e) Discuss role of retinal in body. 2
