

Seat No. : _____

AW-105

May-2016

B.Sc., Sem.-II

CC-103 : Biochemistry

Time : 3 Hours]

[Max. Marks : 70

1. (a) Draw the structure : **6**
(1) Lactose
(2) Cellobiose
(3) Raffinose
- (b) Write a note on structure, function & occurrence of Starch. **4**
- (c) What is inversion ? Explain with an example. **4**

OR

- (a) Draw the structures : **6**
(1) Insulin
(2) Glycogen
(3) Cellulose
- (b) List the occurrence & functions of : **8**
(1) Chitin
(2) Hyaluronic acid
(3) Heparin
(4) Pectin
2. (a) Discuss functions of different Proteins. **8**
- (b) Discuss the Quaternary structure of Proteins along with Haemoglobin as an example. **6**

OR

- (a) Discuss any **two** : **10**
(1) Any one method of Protein sequencing
(2) Beta pleated structure of Proteins
(3) Precipitation of Proteins by salts
- (b) Write a note on Amphoteric nature of Proteins. **4**

3. (a) Write a note on Prostaglandins. 8
 (b) Write the structure of : 6
 (1) Cerebroside
 (2) Sphingomyelin
 (3) Phosphatidic acid

OR

- (a) Write the structure, functions & properties of cholesterol. 9
 (b) Discuss the physical properties of Phospholipids. 5
4. (a) Write the structure of : 6
 (1) Cytidine
 (2) Uracil
 (3) Adenylic acid
 (b) Discuss types of RNA. 8

OR

- (a) Write the structure & functions of : 6
 (1) IMP
 (2) cGMP
 (3) UDP-Glucose
 (b) Draw, label & list the important features of DNA double helix structure. 8
5. Answer the following : 14
 (1) What are conjugate proteins ? Give example. 2
 (2) List any two functions of Phospholipids. 1
 (3) When will the protein give Nitroprusside and Xanthoprotein test positive ? 2
 (4) What are rare bases ? Give example. 2
 (5) Define Heteropolysacchride with an example. 1
 (6) Name all the types of bonds present in the structure of protein. 2
 (7) Give the source of Maltose. 1
 (8) What are Plasmalogens ? 1
 (9) List two important properties of Nitrogen bases. 1
 (10) Draw the structure of deoxyribose sugar. 1