

AK-108

April -2018

B.Sc., Sem.-II

CC-3, Paper-103 : Biochemistry**Time : 3 Hours]****[Max. Marks : 70**

1. (a) Give two rich sources & structures of : (1) Sucrose (2) Raffinose **4**
 (b) List the occurrence, structure & functions of Glycogen. **6**
 (c) List the functions of Heteropolysaccharides. **4**

OR

- (a) Draw the structures : (1) Inulin (2) Maltose **4**
 (b) List the occurrence & functions of : (1) Hyaluronic acid (2) Pectin **6**
 (c) What is inversion ? Explain with an example. **4**
2. (a) Discuss the role of Edman's reagent & Sanger's reagent in Protein sequencing. **6**
 (b) Discuss Protein precipitation by Salts & Organic solvents. **8**

OR

- (a) Write a note on any **two** : **8**
 (1) β pleated structure of Protein
 (2) Amphoteric nature of Proteins
 (3) Tertiary structure of Proteins
- (b) Write a note on : Simple Proteins. **6**
3. (a) Discuss the functions of Phospholipids. **8**
 (b) Draw the structure of : (1) Lecithin (2) Ceramide (3) Sphingomyelin **6**

OR

- (a) State the properties & discuss the colour reactions of Cholesterol. **8**
 (b) Write a note on Cerebrosides. **6**

4. (a) Write the structure of : (1) Thymidine (2) Cytosine (3) ATP 6
(b) Name & give the functions of the different types of RNA. 8

OR

- (a) Write the structure & functions of : (1) cGMP (2) IMP 6
(b) Give the differences between DNA & RNA. 8
5. Answer the following : 14

- (1) Give any two functions of Proteins. (2)
(2) What are Conjugate Proteins? Give an example. (1)
(3) List the various levels of Protein structure. (1)
(4) Give any two functions of Cholesterol. (2)
(5) What are Prostaglandins ? (1)
(6) What are Gangliosides made up of ? (1)
(7) What are the repeating units of DNA called ? (1)
(8) What is the width of the DNA helix & the length of one turn of DNA helix ? (1)
(9) Name the sugars found in DNA & RNA (1)
(10) Give any two uses of Cellulose. (2)
(11) Define a Homopolysaccharide & give an example. (1)