**Saitech Informatics**

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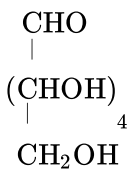
# BIOMOLECULES CHEMISTRY

## Class 12 - Chemistry

**Time Allowed: 1 hour and 30 minutes** **Maximum Marks: 45**

1. Differentiate between **[1]**
   a. Nucleotide and Nucleoside
   b. Amylose and Amylopectin
2. Why are polysaccharides considered non-sugars? **[1]**
3. Define the following terms: **[1]**
   a. Polysaccharides
   b. Nucleotides
4. Give an example of zwitter ion? **[1]**
5. Why cannot vitamin C be stored in our body? **[1]**
6. What type of linkage holds together the monomers of DNA? **[1]**
7. Which polymer is stored in the liver of animals? **[1]**
8. What is the information given by primary structure of proteins? **[1]**
9. The two strands in DNA are not identical but are complementary. Explain. **[1]**
10. Why must vitamin C be supplied regularly in diet? **[1]**
11. What is essentially the difference between $\alpha$- glucose and $\beta$- glucose? What is meant by pyranose structure of glucose? **[3]**
12. List four main functions of carbohydrates in organism. **[3]**
13. Answer the following briefly: **[3]**
    i. What are the good sources of vitamin A?
    ii. What are nucleotides?
    iii. Why is vitamin C essential to us? Give its important sources.
14. Define the following : **[3]**
    i. Co-enzymes
    ii. Mutation in biomolecules
    iii. Nucleotides
15. What are enzymes? **[3]**
16. What is the basic structural difference between starch and cellulose? **[5]**
17. Describe the terms D- and L- configuration used for amino acids with examples. **[5]**
18. On the basis of which evidences D-glucose was assigned the following structure? **[5]**



19. Write the important structural and functional differences between DNA and RNA. **[5]**