

# Unit Practice Test

*for Board Examination*

Time allowed : 2 Hrs.

Maximum Marks : 35

1. What are the products of hydrolysis of sucrose ? (1)
2. Which enzyme is used to cure heart disease ? (1)
3. What type of bonds hold a DNA double helix together ? (1)
4. Name the purines present in DNA. (1)
5. Which enzyme is present in saliva ? What is its function ? (1)
6. The two strands in DNA are not identical but are complementary. Explain this statement. (2)
7. Enumerate the reactions of glucose which cannot be explained by its open chain structure. (2)
8. How do you explain the amphoteric character of amino acids. (2)
9. What are the polysaccharides that make up starch and what is the difference between them ? (2)
10. What is glycogen? How is it different from starch? (2)
11. Define the following terms as related to proteins :
  - (i) Primary structure
  - (ii) Peptide linkage
  - (iii) Denaturation. (3)
12. What are essential and non-essential amino acids? Give two examples of each type. Explain the amphoteric behaviour of amino acids. (3)
13. What happens when D-glucose is treated with
  - (i) Bromine water
  - (ii) Nitric acid
  - (iii) HI.
14. (a) What are disaccharides ? Discuss the structure of sucrose. (3)  
(b) What is mutarotation ? (3)
15. Name the products obtained on complete hydrolysis of DNA. Enumerate the differences between DNA and RNA. In what ways a nucleotide is different from nucleoside. Illustrate with examples. (3)
16. (a) What are vitamins ? How are these classified.  
(b) Name the vitamins whose deficiency causes.
  - (i) rickets
  - (ii) beri-beri
  - (iii) night blindness.  
(c) Give two differences between hormones and vitamins. (5)



► To check your performance, see HINTS AND SOLUTIONS TO SOME QUESTIONS at the end of Part II of the book.

- 4. Adenine and guanine
  - 5. Amylase. It hydrolyses starch into maltose.
  - 6. The bases of one strand of DNA are paired with bases of other strand through hydrogen bonding. The hydrogen bonding is very specific because structures of heterocycles allow only one mode of pairing. The two strands of DNA are complementary to each other because the sequence of bases in one strand automatically determines that of the other.
13. (b) (i) Gluconic acid (ii) Saccharic acid (iii) *n*-hexane.
16. (b) (i) Vitamin D  
(ii) Vitamin B<sub>1</sub>  
(iii) Vitamin A.
12. Essential amino acids: Valine, Leucine  
Non-essential amino acids: Alanine, Glycine.