

Chapter 14

Biomolecules

Very Short Answer Type Questions

01. Name two of the different types of RNA molecules found in the cells of organisms.
02. Sketch the zwitter ion form of amino acetic acid.
03. What is the importance of amino acid to us
04. In what sense are the two strands of DNA not identical but complementary to each other?
05. Why is cellulose in our diet not nourishing?
06. Name the deficiency diseases resulting from lack of vitamins A and E in the diet.
07. What is invert sugar?
08. What are disaccharides? Given an example.
09. What are nucleotides? Name two classes of nitrogen-containing bases found in nucleotides.
10. What happens when glucose is treated with bromine water?

Very Short Answer Type Questions

11. What is meant by reducing sugars?
12. What are enzymes? Describe the mechanism of enzyme activity?
13. Name the anomers of glucose. How do they differ and what is the chief consequence of this difference?
14. How are proteins related to amino acids? Mention differences between fibrous and globular protein.
15. State the significance of primary and secondary structures of proteins.
16. B - complex is an often prescribed vitamin. What is complex about it and what is its usefulness
17. (i) List two characteristic features of enzymes.
(ii) What are proteins? State a difference between globular and fibrous proteins.
18. Name the different types of RNA found in the cell. Mention their functions.
19. State differences between the following pairs.
 - (i) α - Helix and β - pleated sheet structures.
 - (ii) Primary and secondary structures of protein
 - (iii) Enzymes and coenzymes.
20. Differentiate between
 - (i) Primary and secondary structure of proteins
 - (ii) Gene and genetic code

Long Answer Type Questions:

21. Enumerate the structural differences between DNA and RNA.
22. Define and classify vitamins.
23. Name the diseases caused by the lack of any three vitamins.
24. Write the major classes in which the carbohydrates are divided depending upon whether these undergo hydrolysis and if so, on the number of products formed.
25. Name the diseases caused due to the deficiency of vitamins B₁, B₂ and B₁₂
26. What is an essential and non-essential amino acid? Give two examples of each.
27. (i) Which forces are responsible for the stability of α – helix ?
(ii) What is a denatured protein?
28. What happens when D-glucose is treated with the following reagents?
(i) HNO₃ (ii) Bromine water (iii) HI
29. Describe the following, giving an example for each
(i) Glycosidic linkage (ii) Peptide linkage
30. List the reactions of glucose which cannot be explained by its open-chain structure.

ODM
EDUCATIONAL GROUP
Changing your Tomorrow