



CHEMISTRY

BOOKS - BETTER CHOICE PUBLICATION

BIOMOLECULES

Question Bank

1. Covalent compounds are soluble in



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2. Why are carbohydrates generally optically active ?



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3. What are monosaccharides ?



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4. What are disaccharides ?



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5. What are polysaccharides ?



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6. What are the differences between sugars and non-sugars



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7. What are reducing sugars ?



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8. Differentiate between reducing and non-reducing sugars.



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9. Differentiate between reducing and non-reducing sugars.



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10. Classify the following into monosaccharide and disaccharide.

Ribose, 2-dexoyribose, maltose, galactose, fructose and lactose.



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11. What is meant by linkage?



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12. What is glycogen ? How is it different from starch?



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13. What are the hydrolysis products of (a) sucrose (b) lactose?



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14. Enumerate the reactions of D-glucose which cannot be explained by its open chain structure.



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15. Name two important polysaccharides of D-glucose.



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16. What is the basic difference between starch and cellulose ?



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17. What are Carbohydrates ? Why are these main sources of energy?



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18. What do we get when starch is hydrolysed?



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19. What are the functions of carbohydrates in living organisms?



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20. Draw the pyranose structure of $\alpha - D - glu\ cosine$.



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21. Draw the pyranose structure of $\alpha - D - \text{glucose}$.



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22. What are Carbohydrates ? Why are these main sources of energy?



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23. Write the linear and cyclic structures of glucose. What is the difference between α -glucose and β -glucose ?



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24. What is mutarotation ?



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25. What is mutarotation ?



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26. What are anomers ?



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27. What do you mean by inversion of cane sugar ?



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28. The solubility in water of amino acids are generally higher than that of the corresponding halo acids. Explain.



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29. Where does the water present in the egg go after boiling the egg?



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30. What are α -amino acids ?



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31. What are essential and non-essential amino acids ? Give two examples of each type.



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32. Chemically denaturation does not change the primary structure of protein.



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33. Define the Denaturation as related to proteins.



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34. Explain secondary structure of proteins.



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35. What type of bonding helps in stabilising the α -helix structure of proteins?



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36. What is the difference between globular and fibrous protein ?



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37. How do you explain amphoteric nature of amino acids?



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38. What is denaturation of proteins ?



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39. What is denaturation of proteins ?



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40. Explain isoelectric point of α -amino acids.



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41. What is the effect of denaturation on the structure of proteins?



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42. How can you classify the proteins on the basis of hydrolysis products ?



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43. What are proteins? Give important functions of proteins in living organism.



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44. What is peptide bond ? Give one example.



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45. Write zwitter ion structure of glycine.



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46. What do you understand by native structure of protein?



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47. Give difference between polypeptides and proteins.



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48. What are proteins ?



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49. Name one fibrous and one globular protein.



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50. Explain primary and secondary structure of proteins in brief.



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51. State difference between the α -helix and β -pleated sheet configuration.



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52. what is the composition of enzymes?



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53. What are enzymes ? How many enzymes have been identified ?



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54. What are enzymes?



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55. Which enzyme is used for the hydrolysis of cellulose ?



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56. Which enzyme is used for the hydrolysis of maltose ?



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57. Name the enzyme which converts maltose into glucose.



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58. Which enzyme is used for the hydrolysis of sucrose?



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59. Name the enzyme which converts sucrose into glucose and fructose.



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60. Name the enzyme which converts glucose into alcohol.



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61. Name the enzyme which converts starch into maltose.



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62. How do enzymes differ from catalysts ?



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63. Why cannot vitamin C be stored in our body?



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64. How are vitamins classified ? Name the vitamin responsible for coagulation of blood ?



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65. Write one function and two sources of vitamin D.



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66. Write chemical name of Vitamin B_2 .



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67. Why are vitamins essential to us ? Give the roles of various vitamins in our body.



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68. Write two sources of vitamin A and disease caused by its deficiency.





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69. Write two sources of vitamin C and disease caused by its deficiency.



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70. What is the chemical name of vitamin A and which disease is caused by its deficiency ?



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71. What is the chemical name of vitamin C and which disease is caused by its deficiency ?



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72. Describe the role or functions of vitamin A in our body.



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73. Describe the role or functions of vitamin C in our body.



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74. Describe the role or functions of vitamin D in our body .



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75. What is the chemical name of vitamin D and which disease is caused by its deficiency ?



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76. When RNA is hydrolysed, there is no relationship among the quantities of different bases obtained. What does this fact suggest about the structure of RNA?



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77. What is nucleic acid ?



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78. What is the difference between nucleoside and nucleotide ?



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79. What are nucleotides? Write their constituents. List their functions.



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80. What are nucleosides ?



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81. The two strands in DNA are not identical but are complimentary. Explain.



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82. Write six differences between DNA and RNA.



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83. Which sugar molecule is present in DNA molecule ?



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84. Which sugar molecule is present in RNA molecule ?



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85. What are different types of RNA formed in the cell ?



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