



CHEMISTRY

BOOKS - MBD -HARYANA BOARD

BIOMOLECULES

Objective Type Question

1. Which of the following is not present in DNA ?

A. Adenine

B. Guanine

C. Thymine

D. Uracil

Answer: D



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2. Vitamin B_1 is called :

A. Ascorbic acid

B. Thiamine

C. Pyridoxine

D. Riboflavin

Answer: B



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3. Rickets may be caused by the deficiency of which vitamin ?

A. Vitamin D

B. Vitamin C

C. Vitamin A

D. Vitamin B

Answer: A



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4. Which of the following is water soluble vitamin ?

A. Vitamin 'E'

B. Vitamin 'K'

C. Vitamin 'B'

D. Vitamin 'A'

Answer: B



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5. Vitamin 'A' is called :

A. Ascorbic acid

B. Retinol

C. Calciferol

D. Tocopherol

Answer: B



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6. The deficiency of vitamin B_1 causes which diseases ?

A. Beri-Beri

B. Rickets

C. Anaemia

D. Xerosis

Answer: A



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7. Deficiency of Vitamin C causes :

A. Scurvy

B. Rickets

C. Anaemia

D. None of these

Answer: A



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8. The group linkage present in fats is :

A. peptide linkage

B. ester linkage

C. glycoside linkage

D. None of these

Answer: B



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9. Vitamin soluble in water

A. D

B. K

C. E

D. B

Answer: D



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10. Base present in RNA and not in DNA is :

A. Uracil

B. Cytosine

C. Guanine

D. Thymine.

Answer: A



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11. Hydrolysis products of maltose are :

A. Glucose and glucose

B. Glucose and sucrose

C. Glucose and galactose

D. None of these

Answer: A



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12. Vitamin causes coagulation of blood is :

A. B_1

B. D

C. K

D. C

Answer: C



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13. Which of the following is not an essential

A. Glycine

B. Lysine

C. Phcnylalanine

D. Valine

Answer: A



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14. Glycogen is an example of :

- A. Polysaccharide
- B. Disaccharide
- C. Monosaccharide
- D. Protein

Answer: C



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1. Linkages are present in carbohydrates .



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2. Ascorbic acid belongs to which vitamin ?



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3. Riboflavin belongs to which vitamin ?



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4. Thiamine belongs to which vitamin ?

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5. Why carbohydrates acts as a biofuel ?

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6. Why is cellulose not digestible in human beings ?



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7. What is isoelectric point ?



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8. Haemorrhage disease is caused by deficiency of which vitamin ?



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9. Beri-Beri disease is caused by deficiency of which vitamin ?



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10. What is the basic structural difference between starch and cellulose ?



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11. What do you understand by the term glycosidic linkage ?



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12. What are biomolecules ?



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13. Which monosaccharide glucose units are present in sucrose and lactose ?



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



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15. Give one use of cellulose.



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16. What is Colloidion ?



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17. What is the importance of amino acids to us?



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18. What is genetic code ?



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19. (a) What is a triplet in DNA molecule ?

(b) What does DNA and RNA stand for?



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20. Why cellulose cannot be used as food for human beings?



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21. What is invert sugar ?



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22. Give an example of anomers.



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23. State one use for the enzyme streptokinase in the medicine ?



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24. Name a polysaccharide which is usually stored in the liver of animals.



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25. What are the constituents of starch ?



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26. What do you mean by Peptide linkage ?



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27. Write the names of the products when sucrose is hydrolysed ?



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28. What is glycosidic linkage ?



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1. Draw the structure of β -D-ribose and β -D-2-deoxyribose.



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2. (a) What is ATP ? Why is it energy rich molecule ?

(b) What causes deficiency of Vitamin K ?



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3. What is denaturation of proteins ?



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4. What is the effect of denaturation of proteins ?



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5. How does it affect properties of protein ?



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6. (a) What are reducing and non-reducing sugars ?

(b) Pyorrhoea is caused by the deficiency of which Vitamin ?



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7. How do you explain the amphoteric behaviour of amino acids ?



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



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9. What are non-essential amino acids ? Give two examples.



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10. Differentiate between globular and fibrous proteins .



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11. (a) Which bonds in the back bone of a peptide can rotate freely and which cannot ?
Give reasons.

(b) Write one difference between parallel and antiparallel β -pleated sheets. Give one example of parallel β -pleated sheet.





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12. What are biomolecules ? Give two examples occurring in living systems.



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13. State differences between the following pairs :

(i) α -Helix and β -pleated structures.

(ii) Primary and secondary structure of protein.

(iii) Enzymes and coenzymes.



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14. Give the differences between DNA and RNA.



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15. Write the important structural and functional differences between DNA and RNA .



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16. Name the anomers of glucose. How do they differ and what is the chief consequence of this difference?



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17. Give two differences between Starch and Cellulose.



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18. Give a basic structural difference starch and calculation.



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19. Draw structure of sucrose .



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



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21. Draw structure of lactose .



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22. Give two differences between peptides and proteins.



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23. Name the chemical components which constitute nucleotides.



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24. What are the products obtained on complete hydrolysis of DNA. Write down the structure of sugar present in DNA.



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25. Define and classify vitamins. Name the disease caused due to lack of any three of them .



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26. What are vitamins ? How are they classified ? Give two examples of each category .



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1. (a) What are carbohydrates ? Name four important functions of carbohydrates.

(b) How are carbohydrates classified ?



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2. What are proteins ? Discuss briefly the structure of proteins .



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3. What are amino acids ? Why are they so important ?



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4. (a) What are enzymes ? How many enzymes have been identified so far ?

(b) What are the important properties of enzymes ?

(c) How do the enzymes catalysts work ? Give examples.



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5. (a) List four biological functions of proteins.

(b) Name two diseases which are caused by the deficiency of Vitamin A and B.



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6. (a) What are nucleic acids ? How are they classified ?

(b) What are its structural building blocks ?



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7. How does DNA replicate ? Describe the mechanism of replication. How is the process responsible for preservation of heredity ?



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