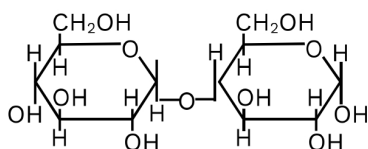


Biomolecules

1. **Assertion (A):** D(+)- Glucose is dextrorotatory in nature.
Reason (R): 'D' represents its dextrorotatory nature.
- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 - (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 - (3) (A) is true but (R) is false
 - (4) Both (A) and (R) are false

2. **Assertion (A):** Vitamin D can be stored in our body.
Reason (R): Vitamin D is fat soluble vitamin.
- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 - (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 - (3) (A) is true but (R) is false
 - (4) Both (A) and (R) are false

3. **Assertion (A):** α -glycosidic linkage is present in maltose,



Reason (R): Maltose is composed of two glucose units in which C-1 of one glucose unit is linked to C-4 of another glucose unit.

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
- (3) (A) is true but (R) is false
- (4) Both (A) and (R) are false

4. **Assertion (A):** All naturally occurring α -aminoacids except glycine are optically active.

Reason (R): Most naturally occurring amino acids have L-configuration

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
- (3) (A) is true but (R) is false
- (4) Both (A) and (R) are false

5. **Assertion (A):** Deoxyribose, $C_5H_{10}O_4$ is not a carbohydrate.

Reason (R): Carbohydrates are hydrates of carbon so compound which follow $C_x(H_2O)_y$ formula are carbohydrates.

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
- (3) (A) is true but (R) is false
- (4) Both (A) and (R) are false

6. **Assertion (A):** Glycine must be taken through diet.

Reason (R): It is an essential amino acid.

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
- (3) (A) is true but (R) is false
- (4) Both (A) and (R) are false

7. **Assertion (A):** In presence of enzyme, substrate molecule can be attacked by the reagent effectively.

Reason (R): Active sites of enzymes hold the substrate molecule in a suitable position.

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
- (3) (A) is true but (R) is false
- (4) Both (A) and (R) are false

- 8. Assertion (A):** D-(+)-Glucose and L-(-)-glucose are enantiomer.
Reason (R): Enantiomer are stereoisomer which are not mirror image.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 9. Assertion (A):** Lactose is a reducing sugar.
Reason (R): Upon hydrolysis lactose gives 2 molecules of glucose.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 10. Assertion (A):** All enzymes are made up of proteins which have three dimensional structure.
Reason (R): Secondary structure of protein are sequence of amino acid.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 11. Assertion (A):** Sucrose is dextro rotatory but its aqueous solution is laevorotatory.
Reason (R): Laevorotation of fructose is more than dextro rotatory of glucose.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 12. Assertion (A):** Oxidation of glucose by Br₂-water gives saccharic acid.
Reason (R): Br₂-water oxidises -CHO and -OH group.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 13. Assertion (A):** Fructose is a reducing sugar.
Reason (R): It has a ketonic group.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 14. Assertion (A):** Starch is a polymer of α-D-Glucose.
Reason (R): It is consist of two components amylose and amylopectin.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false
- 15. Assertion (A):** A solution of sucrose in water is dextro-rotatory. But on hydrolysis in the presence of a little hydrochloric acid it becomes laevo-rotatory.
Reason (R): Sucrose on hydrolysis gives unequal amounts of glucose and fructose. As a result of this, change in sign of rotation is observed.
 (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A)
 (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A)
 (3) (A) is true but (R) is false
 (4) Both (A) and (R) are false



ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	3	1	2	2	4	4	1	3	3	3	1	4	2	2	3