

SAINIK SCHOOL GOPALGANJ

SUBJECT – CHEMISTRY

BIOMOLECULES

ASSIGNMENTS –

1. Which is a reducing sugar?

- (a) Galactose
- (b) Gluconic acid
- (c) Sucrose
- (d) β -methyl galactosid

2. Name the simplest amino acid

- (a) Alanine
- (b) Tyrosine
- (c) Asparagine
- (d) Glycine

3. On oxidation with a mild oxidising agent like $\text{Br}_2/\text{H}_2\text{O}$, the glucose is oxidized to

- (a) saccharic acid
- (b) gluconic acid
- (c) gluconic acid
- (d) valeric acid

4. Invert sugar is

- (a) a type of cane sugar
- (b) optically inactive form of sugar
- (c) mixture of glucose and galactose
- (d) mixture of glucose and fructose in equimolar quantity

5. Glycosidic linkage is an

- (a) amide linkage
- (b) ester linkage
- (c) ether linkage
- (d) acetyl linkage

6. Starch is composed of two polysaccharides which are

- (a) amylopectin and glycogen
- (b) amylose and glycogen

- (c) amylose (20%) and amylopectin (80%)
- (d) cellulose and glycogen

Question 7.

Which reagent is used to convert glucose into saccharic acid?

- (a) $\text{Br}_2/\text{H}_2\text{O}$
- (b) Nitric acid
- (c) Alkaline solution of iodine
- (d) Ammonium hydroxide

Question 8.

Maltose is made up of

- (a) two α -D-glucose
- (b) normal β -D-glucose
- (c) α - and β -D-glucose
- (d) fructose

Question 9.

What is the basic formulae for starch?

- (a) $(\text{C}_6\text{H}_{12}\text{O}_6)_n$
- (b) $(\text{C}_6\text{H}_{10}\text{O}_5)_n$
- (c) $\text{C}_{12}\text{O}_{12}\text{O}_{11}$
- (d) $(\text{C}_6\text{H}_{12}\text{O}_4)_n$

Question 10.

Which of the following is an example of an aldopentose?

- (a) D-Ribose
- (b) Glyceraldehyde
- (c) Fructose
- (d) Erythrose

VSA type

11. What are nucleic acids? Mention their two important functions.
12. Enumerate the reactions of glucose which cannot be explained by its open chain Structure.
13. What are the reducing and non- reducing sugars? What is the structural feature characterizing reducing sugars?
14. Name the sugar present in milk. How many monosaccharide units are present in it? Name these monosaccharides?
15. What are proteins? State a difference between a fibrous protein and a globular protein?

SA type

16. Distinguish between primary and secondary structure of protein.
17. Describe the secondary (double helix) structure of DNA with the help of a diagram.
18. Explain the denaturation of protein.
19. Describe the peptide linkage .
20. Define and classify the vitamins. Name the disease caused due to the lack of any three of them.