

CHEMISTRY STUDY MATERIALS FOR CLASS 12 (NCERT Based Questions - Answers)

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DATE:- 06/11/2021

Biomolecules

LONG ANSWER TYPE QUESTIONS (5 Marks)

- Q. 1. (i) Give one example each of fibrous protein and globular protein.
(ii) What happens when D-glucose reacts with Br₂ water?
(iii) What type of linkage is responsible for the formation of protein?
(iv) Explain mutarotation with suitable example.

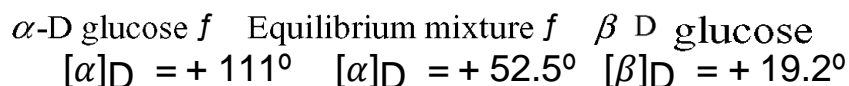
Ans. (i) Fibrous protein: Keratin

(ii) Globular protein: Hormone

(iii) $C_6H_{12}O_6 + Br_2 \text{ water} \rightarrow \text{gluconic acid}$

(iv) Peptide bond

(v) Spontaneous change in specific rotation of an optically active compound with time, to an equilibrium value is called mutarotation. For example,



Q. 2. (i) Name the three major classes of carbohydrates and give an example of each of these classes.

(ii) Answer the following :

(a) What type of linkage is responsible for primary structure of proteins?

(b) Name the location where protein synthesis occurs in our body

Ans. (i) Carbohydrates are classified as :

(a) Monosaccharides e.g., Glucose. (b) Oligosaccharides e.g., Sucrose

(c) Polysaccharides e.g., Starch

(ii) (a) Peptide bond

(c) Protein synthesis occurs in cytoplasm of cell by mRNA with the help of rRNA and tRNA.

MULTIPLE CHOICE QUESTIONS

Q. 1. Which one is the complementary base in RNA strand to the thymine base in DNA during protein synthesis?

- (a) **Adenine** (b) Uracil (c) Cytosine (d) Guanine

Q. 2. Which of the vitamin deficiency causes Xerophthalmia ?

- (a) **A** (b) B (c) E (d) K

Q. 3. Which one is not present in RNA?

- (a) Uracil **(b) Thymine** (c) Ribose (d) Phosphate

Q. 4. Which of the following is a disaccharide?

- (a) Fructose (b) Glucose **(c) Sucrose** (d) Xylose

Q. 5. Fructose is a :

- (a) Aldose **(b) Ketose** (c) (a) and (b) (d) None of these

VALUE BASED QUESTIONS (4 Marks)

Q. 1. After watching a programme on TV about the adverse effects of junk food and soft drinks on the health of school children, Sonali, a student of class XII, discussed the issue with principal. They instructed canteen person to replace fast food with fibre & vitamin rich food like salad, fruits, sprouts etc. This decision was welcomed by the parents and students.

After reading above passage, answer the following:

- (i) What values are expressed by Sonali & Principal of school?
(ii) Give two examples of water soluble vitamins.

Ans. (i) Sonali : Concerned for society, socially active and helpful to others.

Principal : Caring, commanding and serious about the welfare of students.

(ii) Vitamin B and C.
