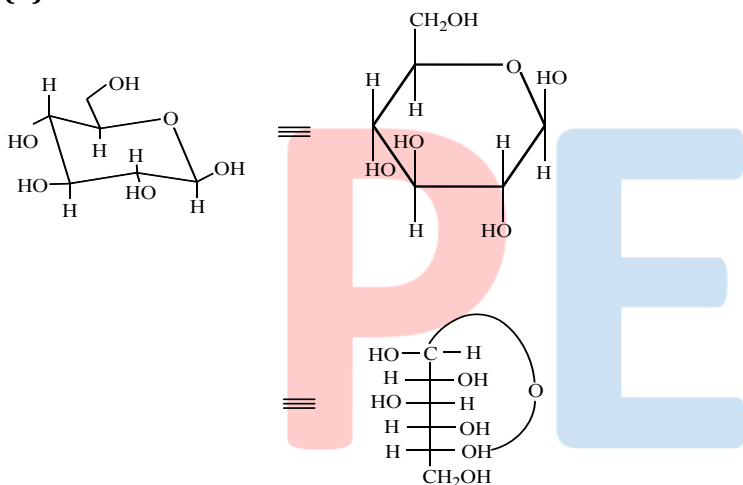


Topic :- Biomolecules

- 1 (c)
Honey is collected from flowers by honey bee which contains fructose.
- 2 (d)
Which one of the following is not a protein?
- 4 (b)



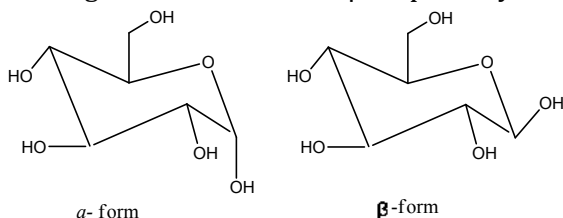
- In β - D glucopyranose all the OH groups and CH_2OH group occupy equatorial position in the most stable conformer.
- 5 (c)
Because food-stuffs mainly contains compounds of C, H and O.
- 6 (d)
All these are sources of fats and oils.
- 7 (a)
A 10% solution of NaOH is called lye, used in hot process for manufacturing soaps.
- 8 (b)
 α -D(+)-Glucopyranose and β -D(+)-glucopyranose are anomers (a pair of stereoisomers which differ in configuration only around first carbon atom)
- 9 (c)
Glucose and fructose have molecular formula $\text{C}_6\text{H}_{12}\text{O}_6$ and possess —CHO and >CO gp. respectively.

10 **(d)**
The first codon of *m*-RNA will be always AUG. This codon specifies the amino-acid methionine. So, the first amino-acid in a polypeptide chain will be always methionine

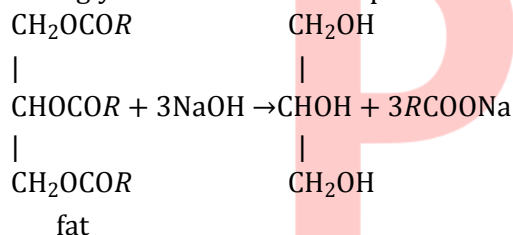
11 **(c)**
It is a fact.

12 **(c)**
The antibiotic puromycin inhibits protein synthesis by causing nascent polypeptide chain to be released before their synthesis is completed

13 **(d)**
Anomers of glucose are cyclic diastereomers (epimers) differing in configuration at C-1 existing in two forms α and β respectively.



15 **(b)**
Fats are esters of higher fatty acids with glycerol, hence on alkaline hydrolysis, they give back glycerol and sodium or potassium salt of acid (this is called soap).



16 **(d)**
Naturally occurring fats are called lipids.

17 **(b)**
Glycine is optically inactive:
 $\text{NH}_2\cdot\text{CH}_2\cdot\text{COOH}$ is glycine
Lysine is optically active:

$$\begin{array}{c}
 \text{NH}_2 \\
 | \\
 \text{NH}_2\text{CH}_2 \cdot \text{CH}_2 \cdot \text{CH}_2\text{CH}_2 \cdot \text{CHCOOH} \\
 *
 \end{array}$$
 is lysine

Glutamic acid is optically active;

$$\begin{array}{c}
 \text{NH}_2 \\
 | \\
 \text{COOH} \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{CH} \cdot \text{COOH} \\
 | \\
 \text{COOH}
 \end{array}$$
 is Glutamic acid

18 **(d)**
It is also called sunshine vitamin.

- 19 **(d)**
(+) lactose on hydrolysis yields equal amount of D (+) glucose and D (+) galactose. These two monosachharides are joined by β - 1, 4-glucosidic linkage. (+) lactose contains hemiacetal gp and thus reducing sugar. Also it exhibits mutarotation.
- 20 **(a)**
Ninhydrin test is highly specific for primary amines. Proline being a secondary amine gives a yellow orange colour with ninhydrin whereas all other α - amino acids give a blue-purple colour with ninhydrin.

PE

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	C	D	A	B	C	D	A	B	C	D
Q.	11	12	13	14	15	16	17	18	19	20
A.	C	C	D	B	B	D	B	D	D	A

PE