

Biomolecules & Polymers

Qualitative & Quantative Analysis of Organic Compounds

Daily Tutorial Sheet-1

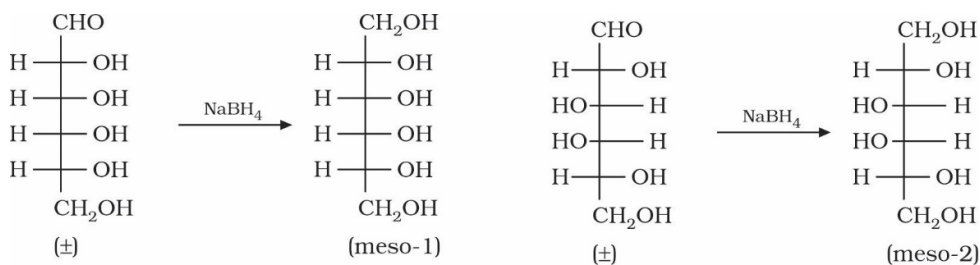
Level-1

- 1.(C) Refer NCERT, Class XII-Part-II, Page-427
- 2.(C) Bakelite is thermosetting polymer. It becomes infusible on heating and cannot be remoulded
- 3.(C)
$$\text{Sucrose} \xrightarrow{\text{H}_3\text{O}^+} \text{D-Glucose} + \text{D-Fructose}$$

$$[\alpha] = +66.5 \quad [\alpha] = +52.5 \quad [\alpha] = -92.4$$

$$\text{net } [\alpha] = -19.9$$

4.(B)



so in total 4 stereoisomers are reduced to meso products.

- 5.(D) Refer NCERT, Class XII-Part-II, Page-430
- 6.(A) Cellulose is the natural fibre which are biodegradable polymer, rest are synthetic polymer which are not biodegradable.
- 7.(C) Polymers formed by condensation process with elimination of small molecule like H_2O , CO_2 etc. are known as condensation polymers.
- eg.
$$\begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CH}_3 \end{array} \text{C} = \boxed{\text{O} + \text{H}_2} \text{CH} - \underset{\text{O}}{\underset{||}{\text{C}}} - \text{CH}_3 \xrightarrow[\text{HCl}]{\text{dil.}} \text{H}_2\text{O} + \begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CH}_3 \end{array} \text{C} = \text{CH} - \overset{\text{O}}{\overset{||}{\text{C}}} - \text{CH}_3$$

Acetone
Mesityl oxide
- 8.(C) Refer NCERT, Class XII-Part-II, Page-431
- 9.(C) S_2 and S_4 are correct. S_1 and S_3 is incorrect because anomers are those which have difference in configuration at C-1.
- 10.(C) D-glucose is the monomer of cellulose.

11.(D) Tetrafluoroethene ($\text{CF}_2 = \text{CF}_2$).

12.(B) Refer NCERT, Class XII-Part-II, Page-434

13.(C) Refer NCERT, Class XII-Part-II, Page-435

14.(A) Refer NCERT, Class XII-Part-II, Page-436

15.(C) Refer NCERT, Class XII-Part-II, Page-428