

|                                       |                        |                            |
|---------------------------------------|------------------------|----------------------------|
| Date Planned : __ / __ / __           | Daily Tutorial Sheet-1 | Expected Duration : 90 Min |
| Actual Date of Attempt : __ / __ / __ | Level-1                | Exact Duration : _____     |

- Which of the following is not an example of copolymer?  
**(A)** Buna-S                      **(B)** Buna-N                      **(C)** Polythene                      **(D)** Linked
- Which one among the following is a thermosetting plastic?  
**(A)** PVC                      **(B)** PVA                      **(C)** Bakelite                      **(D)** Perspex
- Sugar (sucrose) is dextrorotatory (+66.5°) but the invert sugar is laevorotatory (−19.9°). It is due to:  
**(A)** Mutarotation  
**(B)** reducing nature of invert sugar  
**(C)** invert sugar is a 1 : 1 mixture of D-glucose (52.7°) and D-Fructose (−92.4°) obtained by hydrolysis of sugar  
**(D)** Inversion of configuration of sucrose due to hydrolysis
- Observe the following reaction and find out that how many number of reactant stereoisomers can be reduced to optically inactive meso products.
 

$$\begin{array}{c}
 \text{CHO} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CH}_2\text{OH}
 \end{array}$$

$\xrightarrow{\text{NaBH}_4}$

$$\begin{array}{c}
 \text{CH}_2\text{OH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CHOH} \\
 | \\
 \text{CH}_2\text{OH}
 \end{array}$$

  
**(A)** 2                      **(B)** 4                      **(C)** 6                      **(D)** 8
- Which of the following is not true about high density polythene?  
**(A)** It is formed by addition polymerization of ethane under a very high pressure of 1000 to 2000 atmospheres  
**(B)** It has highly branched structure  
**(C)** Traces of dioxygen or a peroxide initiator is used as a catalyst in its formation  
**(D)** All of these
- Which of the following is a biodegradable polymer  
**(A)** Cellulose                      **(B)** Polythene  
**(C)** Polyvinyl chloride                      **(D)** Nylon-6
- Example of condensation polymer is :  
**(A)** Formaldehyde → meta-formaldehyde                      **(B)** Acetaldehyde → para-aldehyde  
**(C)** Acetone → mesityl oxide                      **(D)** Ethene → polythene
- Heating of caprolactam with water at high temperature produces:  
**(A)** Terylene                      **(B)** Nylon 6, 6                      **(C)** Nylon 6                      **(D)** Novolac

9. Find true and False from the following statements regarding carbohydrates  
 $S_1$  : Cellulose is a reducing sugar  
 $S_2$  : Sucrose is an oligo saccharide  
 $S_3$  : A pair of diastereomeric aldoses which differ only in configuration at C-2 are anomers  
 $S_4$  : Osazone formation destroys the configuration at C-2 of an aldose, but does not affect the configuration of the rest of the molecule.  
**(A)** TTTT                      **(B)** TFTF                      **(C)** FTFT                      **(D)** FTTT
10. Complete hydrolysis of cellulose gives :  
**(A)** D-fructose              **(B)** D-ribose              **(C)** D-glucose              **(D)** L-glucose
11. **Teflon** is a polymer of the monomer **or** Teflon is obtained by the polymerisation of :  
**(A)** Monofluoroethene                      **(B)** Difluoroethene  
**(C)** Trifluoroethene                      **(D)** Tetrafluoroethene
12. Heating of rubber with sulphur is known as :  
**(A)** Galvanisation                      **(B)** Vulcanisation  
**(C)** Bessemerisation                      **(D)** Sulphonation
13. Which of the following is a biodegradable synthetic polymer?  
**(A)** Nylon 6, 6                      **(B)** Nylon 6  
**(C)** Nylon 2-Nylon 6                      **(D)** None of these
14. Bakelite is obtained by the polymerization of:  
**(A)** Phenol & Formaldehyde                      **(B)** Ethylene glycol and phthalic acid  
**(C)** Urea & Formaldehyde                      **(D)** None of these
15. Arrange the following polymers in increasing order of their intermolecular forces  
**(A)** Fibres < Thermoplastic Polymers < Elastomers  
**(B)** Elastomers < Fibres < Thermoplastic Polymers  
**(C)** Elastomers < Thermoplastic Polymers < Fibres  
**(D)** Thermoplastic Polymers < Fibres < Elastomers