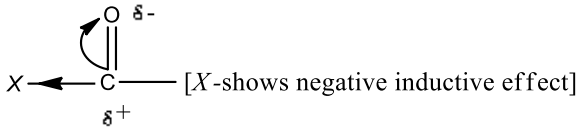
DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth | **SOLUTIONS** | **SUBJECT : CHEMISTRY**
DATE : | **DPP NO. : 1**

2 **Topic :-ORGANIC CHEMISTRY - SOME BASIC PRINCIPLES AND TECHNIQUES** **(a)**

Carbonyl compounds undergoes nucleophilic addition reaction.



[X-shows negative inductive effect]

If group or atom attached with carbonyl carbon shows negative inductive effect, then it decreases electron density on carbonyl carbon and facilitate the attack of nucleophile, hence reactivity of carbonyl compound increases. The aromatic aldehydes and ketones are less reactive than their aliphatic analogues due to +R effect of benzene ring. The increasing order of the nucleophilic addition reaction in the following compounds will be.

$CH_3CHO > CH_3COCH_3 > PhCOCH_3 > PhCOPh$

3 **(b)**

Chiral compounds which have one chiral centre. All four atoms or groups attached to carbon are different.

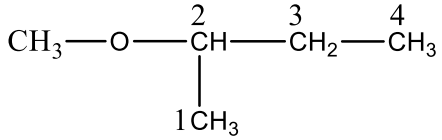
4 **(b)**

Due to the presence of methyl group positive inductive effect increases and the stability of carbocation also increases. The stability order of carbocation is

Tertiary > Secondary > Primary

5 **(b)**

According to IUPAC system ethers are named as alkoxy alkanes. The larger alkyl group forms the parent chain while lower alkyl group is taken with the ethereal oxygen and forms a part of alkoxy group.



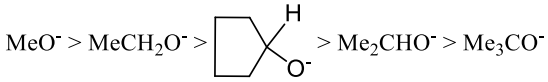
2-methoxybutane

6 **(c)**

H_3^+O cannot accept electron pair.

7 **(a)**

Epoxide is ambident substrate for nucleophilic substitution reactions. In protonated epoxide carbon-2 and carbon-3 both aquire some positive charge due to the highly electronegative atom



8 **(d)**

Beilstein test is used to detect halogens in organic compounds.

9 **(b)**

Free radical chain reaction is initiated by UV light. It proceeds in three main steps like initiation, propagation and termination. It gives major products derived from most stable free radical

11 **(b)**

Follow IUPAC rules.

13 **(d)**

Elimination reactions involves removal of a molecule (HBr here) from a substrate.

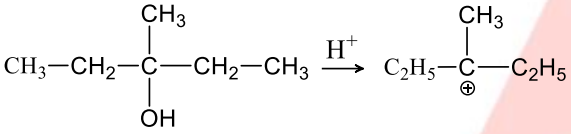
14 **(c)**

$$\underset{\text{ketoform}}{CH_2CH_2-CH_2-\overset{\overset{O}{\|}}{C}-CH_3} \rightleftharpoons \underset{\text{enol form}}{CH_3CH_2CH_2-\overset{\overset{OH}{|}}{C}=CH_2}$$

15 **(b)**

The species which are electron deficient and accept a pair of electron are called electrophile. Hence, SO_3 is a electrophile as it contains an electron deficient centre. While H_2O, NH_3 *and* $R-O-R$ are nucleophiles.

18 **(a)**



In the above reaction more stable carbocation is generated hence, the compound dehydrated very easily

19 **(a)**

In case of kjeldahl's method the percentage of N_2 is then calculated from the amount of NH_3

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