DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth **SOLUTION** **SUBJECT : CHEMISTRY**
DATE : **DPP NO. : 10**

Topic :-ORGANIC CHEMISTRY - SOME BASIC PRINCIPLES AND TECHNIQUES

3 **(a)**

CH_3CH_2Cl; CH_3CHCl_2; CH_2ClCH_2Cl; CH_3CCl_3; $CH_2ClCHCl_2$; CH_2ClCCl_3; $CHCl_2CHCl_2$; $CHCl_2CCl_3$; CCl_3CCl_3

4 **(d)**

(1) and (3) are enantiomeric forms to each other .

5 **(d)**

Methoxy group, due to $+I$ effect, increase electron density on OH- group, thus making it less acidic. Thus, *o*-methoxy phenol and acetylene are less than phenol.

p-nitrophenol is more acidic than phenol.

6 **(c)**

When organic compound is fused with sodium metal, nitrogen of the compound is converted into sodium cyanide as

$$Na + C + N \rightarrow NaCN$$

7 **(c)**

It is structure of furan, a heterocyclic compound.

8 **(a)**

Diazonium salts are highly reactive. In Sandmeyer reaction diazo group is replaced by chlorine or bromine in presence of CuCl or CuBr.(Substitution reaction)

$$C_6H_5\overset{\oplus}{N}_2\overset{\ominus}{Cl} \xrightarrow{CuCl} C_6H_5Cl + N_2$$

9 **(b)**

$X^-$is replaced by OH^-.

10 **(b)**

There are four structural isomers are possible for C_4H_9Cl

(a)$CH_3CH_2CH_2CH_2Cl$

(b)$CH_3 - CH_2 - \underset{\displaystyle Cl}{\underset{|}{CH}} - CH_3$

(c)$CH_3 - \underset{\displaystyle CH_3}{\underset{|}{CH}} - CH_2Cl$

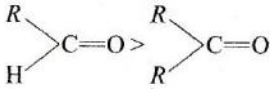
(d) $CH_3-\underset{\underset{CH_3}{|}}{C}-CH_3$

11 **(b)**

A carbanion or carboanion has –ve charge on it.

14 **(c)**

The case with which a nucleophile attacks the carbonyl groups depends upon the electron-deficiency, *i.e*, magnitude of the positive charge on the carbonyl carbon. Since, an alkyl groups has electron-donating inductive effect. ($+I$ effect), therefore, greater the number of alkyl groups attached to the carbonyl groups greater is the electron-density on the carbonyl carbon and hence, lower is its reactivity towards nucleophilic addition reactions.



16 **(c)**

n-pentane and isopentane or 2-methylbutane are chain isomers since both have different hydrocarbon chain.

17 **(a)**

$CH_2 = CH - CHO$

Prop -2-en-1-al

18 **(d)**

Free radicals have unpaired electrons but are neutrals and are reactive.

$\dot{C}H_3 + \dot{C}H_3 \longrightarrow CH_3-CH_3$

20 **(a)**

The second carbon is asymmetric.

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