

CLASS : XIIth
DATE :

SOLUTION

SUBJECT : CHEMISTRY
DPP NO. : 10

Topic :-ORGANIC CHEMISTRY - SOME BASIC PRINCIPLES AND TECHNIQUES

3 (a)

CH₃CH₂Cl; CH₃CHCl₂; CH₂ClCH₂Cl; CH₃CCl₃; CH₂ClCHCl₂; CH₂ClCCl₃; CHCl₂CHCl₂;
CHCl₂CCl₃; CCl₃CCl₃

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

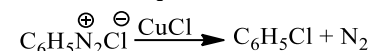


7 (c)

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)



9 (b)

X⁻ is replaced by OH⁻.

10 (b)

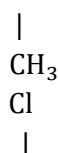
There are four structural isomers are possible for C₄H₉Cl

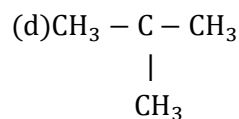
(a)CH₃CH₂CH₂CH₂Cl

(b)CH₃ - CH₂ - CH - CH₃



(c)CH₃ - CH - CH₂Cl



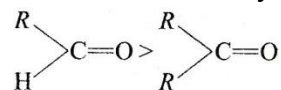


11 (b)

A carbanion or carboanion has -ve charge on it.

14 (c)

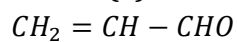
The ease with which a nucleophile attacks the carbonyl groups depends upon the electron-deficiency, *i. e.*, magnitude of the positive charge on the carbonyl carbon. Since, an alkyl group has electron-donating inductive effect. (+I effect), therefore, greater the number of alkyl groups attached to the 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.

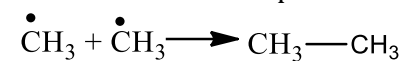
17 (a)



Prop -2-en-1-al

18 (d)

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



20 (a)

The second carbon is asymmetric.

