DPP

DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SOLUTION

SUBJECT : CHEMISTRY
DPP NO. :9

Topic :-HALOALKANES AND HALOARENES

1 **(c)**

$CCl_4 + [H] \xrightarrow{Fe/H_2O(v)} CHCl_3$

2 **(a)**

R —OH + $PCl_5 \rightarrow R$Cl + $POCl_3$ + HCl

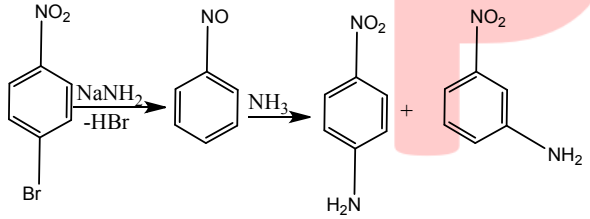
5 **(c)**

R— I > R—Br > R—Cl > R—F; reactivity order due to halogen atom.

3 > 2 > 1°; reactivity order due to alkyl group.

6 **(c)**

Aryl halides in presence of strong base like$NaNH_2$, gives nucleophilic substitution reaction through benzyne intermediate.



7 **(b)**

Rest all replace —OH by —Cl.

8 **(c)**

-OH group is converted into –Cl group by $SOCl_2$ or anhydrous $ZnCl_2$/conc. HCl or HCl etc.

9 **(a)**

C_2H_5Cl + KCN → C_2H_5CN + KCl

Chloroethane alcoholic propanenitrile

10 **(a)**

$CH_3Br + OH^- \rightarrow CH_3OH + Br^-$

This reaction proceeds by S_N2 mechanism.

Rate ∝ [substrate][nucleophile]

Rate ∝ $[CH_3Br][OH^-]$

1 **(b)**

$2CHCl_3 + \frac{1}{2}O_2 \rightarrow COCl_2 + H_2O$;

$COCl_2$, *i.e.*, phosgene is poisonous gas.

12 **(d)**

Westrosol is formed during addition of Cl_2 on CH≡CH followed with action of lime. It is a very good solvent.

$$CH{\equiv}CH + 2Cl_2 \longrightarrow \underset{\text{Westron}}{CHCl_2CHCl_2} \xrightarrow{\text{Lime}} \underset{\text{Westrosol}}{CHCl = CCl_2}$$

14 **(c)**

C—Mg bond is covalent but polar.

15 **(c)**

$$RX \longrightarrow R^+ + X^-; \qquad \underset{\text{Carbocation}}{R^+} + OH^- \longrightarrow ROH$$

17 **(a)**

1. Iodoform test is done to detect presence of CH_3CO group in organic compounds.

2. Fehling solution identifies aldehydes.

3. Tollen's reagent identifies aldehydes.

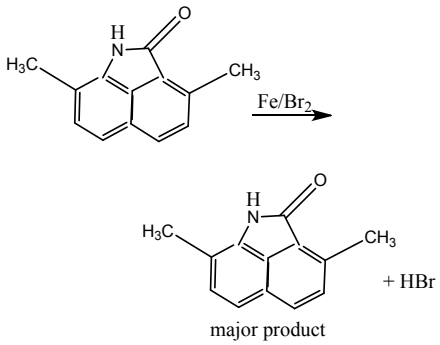
4. Schiff's reagent identifies aldehydes.

Methyl ketone is $CH_3-\overset{\overset{O}{\|}}{C}-R$.

∵ It has $CH_3-\overset{\overset{O}{\|}}{C}$ group. It is tested by using iodoform test.

The compound having CH_3CO group give yellow ppt. on reaction with I_2 and aqueous alkali.

18 **(b)**



major product

It is electrophilic substitution, so electrophile must be attacked on *o/p*-position due to higher electron density on this position. In this ring, the attached –NH- group will have high electron density due to resonance and *ortho* position is blocked, so electrophile is attached on *para* position.

20 **(c)**

CCl_4 is covalent compound.

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