DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SOLUTION

SUBJECT : CHEMISTRY
DPP NO. :5

Topic :-HALOALKANES AND HALOARENES

1 **(d)**

$CHCl_3 + 4NaOH \rightarrow HCOONa + 3NaCl + 2H_2O$

(aq) sodium formate

2 **(b)**

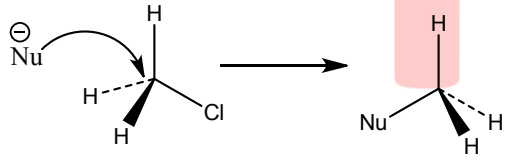
Straight chain alkyl halides have greater boiling point than their isomers. Therefore, $CH_3CH_2CH_2CH_2Cl$ has highest boiling point.

3 **(d)**

CH_3Cl,C_2H_5Cl and CH_3Br are gases at room temperature.

4 **(d)**

Nucleophilic substitution bimolecular (S_N2) prefers less sterically hindered site to attack. Lesser the steric hindrance better the S_N2 reaction. So, ease of reaction is $1^\circ > 2^\circ > 3^\circ$. S_N2 involves inversion of configuration stereochemically (Walden inversion)



5 **(c)**

The best method for the conversion of an alcohol into an alkyl chloride is by treating the alcohol with $SOCl_2$ in the presence of pyridine.

$$ROH + SOCl_2 \rightarrow RCl + HCl + SO_2$$

The other products being gases escape leaving behind pure alkyl halide.

6 **(d)**

Freon, CCl_2F_2 is used in cooling.

7 **(b)**

$CH \equiv CH + 2HCl \longrightarrow CH_3CHCl_2$

8 **(d)**

Cl^- is replaced by OH^- , *i.e.*, nucleophilic substitution.

9 **(d)**

RX are called alkylating agent. CH_3X is methylating agent; C_2H_5X is ethylating agent.

11 **(a)**

Methyl iodide is more reactive for nucleophilic substitution of II order.

12 **(a)**

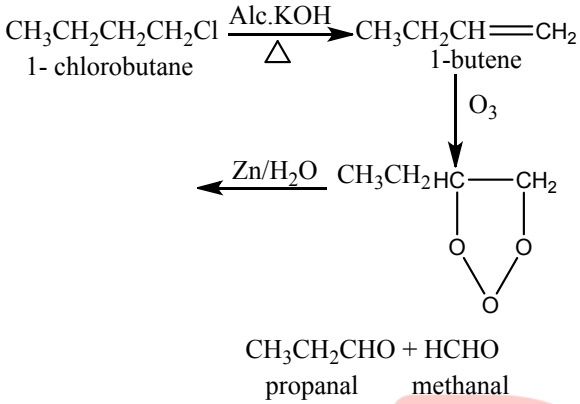
$C_2H_5Cl \xrightarrow{KCN} C_2H_5CN \xrightarrow{Na/alcohol} C_2H_5CH_2NH_2$

13 **(d)**

$CH_3COCH_3 \xrightarrow{Cl_2} CH_3COCCl_3$

14 **(c)**

1-chlorobutane gives butene-1 on reaction with alc. KOH (dehydrohalogenation) which on ozonolysis yields methanal and propanal. The reaction is as follows



$CH_3CH_2CHO + HCHO$

propanal methanal

17 **(d)**

Carbon tetrachloride is not inflammable. It is used as fire-proof agent under the name 'pyrene'.

18 **(a)**

n-butyl alcohol ($CH_3CH_2CH_2CH_2OH$) does not give iodoform test because it does not possess the C H_3CO- or CH_3CHOH group.

19 **(d)**

Grignard reagents are highly reactive and react with any source of proton to give hydrocarbons. It is therefore necessary to avoid even traces of moisture from a grignard reagent.

20 **(c)**

Iodoform test is given by those compounds which has

$CH_3-\underset{\underset{O}{\|}}{C}-C/H$ or $CH_3-\underset{\underset{OH}{|}}{CH}-$ units.

Hence, this test is not given by phenol (C_6H_5-OH).

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