DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SOLUTIO

SUBJECT : CHEMISTRY
DPP NO. :3

Topic :-HALOALKANES AND HALOARENES

2 **(d)**
The density order is:
Iodine > Bromide > Chloride > Fluoride.
Higher is the molecular weight, more is b.p, m.p.

3 **(b)**
$4C_2H_5Br + 4Na - Pb \longrightarrow (C_2H_5)_4Pb + 4NaBr$

7 **(c)**
Follow iodoform test.

8 **(a)**
Chloral + Chlorobenzene → DDT

10 **(a)**
$CH_3C{\equiv}CNa + (CH_3)_2CHCl \longrightarrow CH_3C{\equiv}CCH(CH_3)_2 + NaCl$

11 **(d)**
Solvolysis of haloalkanes follows first order kinetics. During this process an intermediate carbocation is formed. Therefore, the halohydrocarbon which gives more stable carbocation undergoes solvolysis readily.

13 **(d)**
CCl_4 is a covalent compound, therefore, it does not ionise to give Cl^- ions hence, it does not give white ppt. of AgCl when treated with $AgNO_3$ soution. There is no reaction to evolve NO_2 . CCl_4 will form a separate layer as it is immiscible with water.

14 **(a)**
$C - X$ bond in benzyl bromide is much weaker than in vinyl bromide and bromobenzene since the benzyl cation left after the removal of the bromide ion is stabilized by resonance. Further, C-Br is weaker than C-Cl bond. Therefore, $C_6H_5CH_2Br$ has the weakest C-X bond.

15 **(c)**
1. 2-methylpentane $\xrightarrow{Cl_2}$ five types of monochlorinated compounds
2. 3-methylpentane $\xrightarrow{Cl_2}$ four types of monochlorinated compounds
3. 2, 2-dimethylbutane $\xrightarrow{Cl_2}$ three types .....
4. 2, 3-dimethylbutane $\xrightarrow{Cl_2}$ two types ....
5. n-hexane $\xrightarrow{Cl_2}$ three types ....

16 **(c)**
Ethanol on reaction with bleaching powder, gives chloroform (trichloromethane).
$CaOCl_2 + H_2O \rightarrow Ca(OH)_2 + Cl_2$
$C_2H_5OH + Cl_2 \rightarrow CH_3CHO + 2HCl$
$CH_3CHO + 3Cl_2 \rightarrow CCl_3.CHO + 3HCl$
$2CCl_3.CHO + Ca(OH)_2 \xrightarrow{\text{Chloral}} 2CHCl_3 + (HCOO)_2Ca$
chloroform

17 **(c)**

$C_2H_5ONa + C_2H_5I \longrightarrow C_2H_5OC_2H_5 + NaI$; Williamson's synthesis.

18 **(c)**

$$CH_3Br + KCN(alc.) \longrightarrow CH_3CN \xrightarrow[NaC_2H_5OH]{\text{Reduction}} CH_3CH_2NH_2$$

ethylamine

19 **(d)**

Ethyl chloride can be converted into ethanol either by its alkaline hydrolysis or by its reaction with moist AgOH.

$$C_2H_5Cl \xrightarrow[\Delta]{\text{Aq.NaOH}} C_2H_5OH \xleftarrow{AgOH} C_2H_5Cl$$

(A) (B)

20 **(d)**

$CH_3CH_2CH_2CH_2OH \xrightarrow{P+Br_2} CH_3CH_2CH_2CH_2Br$

reduction of alkyl halide with Na

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