

**Halo Alkanes and Haloarenes**

**SUBTOPIC - IV Poly Halogen Compounds**

**1. Iodoform is used as**

- 1) Anaesthetic      2) Antiseptic      3) Analgesic      4) Antifebrin

**2. The following is used in paint removing**

- 1)  $CHCl_3$       2)  $CH_2Cl_2$       3)  $CCl_4$       4)  $CH_3Cl$

**3. In fire extinguishers, following is used**

- 1)  $CH_3Cl_3$       2)  $CS_2$       3)  $CCl_4$       4)  $CH_2Cl_2$

**4. The following is used for metal cleaning and finishing**

- 1)  $CHCl_3$       2)  $CHI_3$       3)  $CH_2Cl_2$       4)  $C_6H_6$

**5. First chlorinated insecticide**

- 1) DDT      2) Gammexane      3) Iodoform      4) Freon

**6. Freon R - 22 is**

- 1)  $CHClF_2$       2)  $CCl_2F_2$       3)  $CH_3Cl$       4)  $CH_2Cl_2$

**7. The following is used as anaesthetic**

- 1)  $C_2H_4$       2)  $CHCl_3$       3)  $CH_2Cl_2$       4) DDT

**8. Freon - 12 is**

- 1)  $CF_3Cl$       2)  $CHCl_2F$       3)  $CF_2Cl_2$       4)  $CFCl_3$

**9. Molecular formula of DDT has**

- 1) 5 Cl atoms      2) 4 Cl atoms      3) 3 Cl atoms      4) 2 Cl atoms

**10. Which of the following compounds is used as a refrigerant?**

- 1)  $CHCl_3$       2)  $CCl_4$       3)  $C_2H_6$       4)  $CCl_2F_2$

Key

1) 2    2) 2    3) 3    4) 3    5) 1    6) 1    7) 2    8) 3    9) 1    10) 4

**SUBTOPIC - V Previous Competitive Questions**

1. Consider the following reaction,  $C_2H_5Cl + AgCN \xrightarrow{EtOH/H_2O} X$  (major).  
Which one of the following statements is true for  $X$  (EAMCET-2009)
- I) It gives propionic acid on hydrolysis  
II) It has an ester functional group  
III) It has nitrogen linked to ethyl carbon  
IV) It has a cyanide group
- 1) IV                                      2) III                                      3) II                                      4) I
2.  $C_2H_5OH + SOCl_2 \xrightarrow{Pyridine} x + y + z$  in this reaction x, y and z respectively are (EAMCET -2008)
- 1)  $C_2H_4Cl_2, SO_2, HCl$               2)  $C_2H_5Cl, SO_2, HCl$               3)  $C_2H_5Cl, SOCl, HCl$               4)  $C_2H_4, SO_2, Cl_2$
3. Identity 'B' in the following reaction (EAMCET - 2007)
- $$CH_2 = CH_2 + HCl \xrightarrow{\text{anhydrous } AlCl_3} A \xrightarrow[\substack{\text{Zn-Cu in} \\ C_2H_5OH}]{2H} B + HCl$$
- 1)  $CH_7$                                       2)  $C_2H_6$                                       3)  $C_2H_5Cl$                                       4)  $C_2H_5OH$
4.  $C_2H_5Cl \xrightarrow{\text{dry } Ag_2O} A \xrightarrow[Al_2O_3]{360^\circ} B \xrightarrow{S_2Cl_2} C$   
In the above sequence of reactions identify 'C' (EAMCET-2007)
- 1) Chloretone                              2) Chloropicrin                              3) Mustard gas                              4) Lewisite gas

5. Ethyl Chloride on reduction with  $LiAlH_4$  gives compound 'X' as important product, 'X' on chlorination with one mole of  $Cl_2$  in the presence of light at ordinary temperature gives Y, what is 'Y'? (EAMCET-2007)

- 1)  $C_2H_6$                       2)  $C_2H_4$                       3)  $C_2H_5Cl$                       4)  $C_2H_5OH$

6. Which of the following can give a grignard reagent when reacted with magnesium in dry ether? (EAMCET-2006)

- 1)  $C_2H_6$                       2)  $C_2H_5Cl$                       3)  $C_2H_5OH$                       4)  $C_2H_5CN$

7. Which of the following reagents when heated with ethyl chloride forms ethylene? (EAMCET-2006)

- 1) Aqueous KOH              2) Zn/HCl                      3) Alcoholic - KOH              4) HI

8. Tertiary alkyl halides are particularly substituted by  $S_N2$  mechanism because of (EAMCET-2005)

- 1) Steric hindrance              2) Inductive effect              3) Instability                      4) Insolubility

9. Identify A and B in the following reactions:  $A \xrightarrow{aq. NaOH/\Delta} C_2H_5OH \xleftarrow{AgOH} B$

(EAMCET 2005)

- 1)  $A = C_2H_2, B = C_2H_6$                       2)  $A = C_2H_5Cl, B = C_2H_4$   
3)  $A = C_2H_4, B = C_2H_5Cl$                       4)  $A = C_2H_5Cl, B = C_2H_5Cl$

10. What is the molecular formula of the product formed when Benzene is reacted with ethyl chloride in presence of anhydrous aluminium chloride?

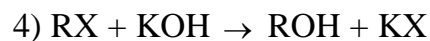
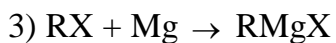
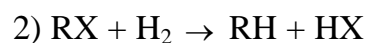
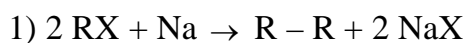
(EAMCET 2004)

- 1)  $C_8H_{10}$                       2)  $C_6H_6$                       3)  $C_8H_8$                       4)  $C_6H_5Cl$

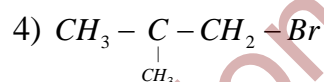
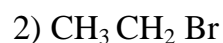
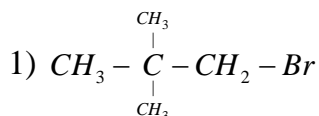
11. Identify A and B in the following reaction (EAMCET 2004)

- 1)  $A = aq. KOH, B = AgOH$                       2)  $A = alc. KOH, B = aq. NaOH$   
3)  $A = aq. NaOH, B = AgNO_2$                       4)  $A = AgNO_2, B = KNO_2$

12. Which of the following reactions is an example of nucleophilic substitution reaction? (AIPMT 2009)



13. In  $\text{S}_{\text{N}}2$  substitution reaction of the type  $\text{R}-\text{Br} + \text{Cl}^- \xrightarrow{\text{DMF}} \text{R}-\text{Cl} + \text{Br}^-$  which one of the following has the highest relative rate? (AIPMT 2008)



Key

1) 2    2) 2    3) 2    4) 3    5) 3    6) 2    7) 3    8) 1    9) 4    10) 1

11) 1    12) 4    13) 2