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**Max Time : 1 hr** **Class = 12th Chemistry Test Max Marks : 30**

**Haloalkanes and Haloarenes**

1. Why is t-butyl bromide more reactive towards SN1 reaction as compared to n-butyl bromide? [ 1 ]
2. Arrange each set in order of increasing boiling points : [ 2 ]
3. Bromomethane , Bromoform , Chloromethane , Dibromomethane .
4. 1 – chloropropane , Isopropyl chloride , 1 – Chlorobutane .
5. Which compound in each of the following pairs will react faster in SN2 reaction with OH – ? [ 2 ]

(a) CH3 Br **or** CH3 I (b) (CH3)3 C Cl **or** CH3 Cl

1. Which one of the following has highest dipole moment? [ 2 ]

(a) CH2Cl2 (b) CHCl3 (c) CCl4

1. p – Dichloro benzene has highest melting point than those of o – and m – isomers. Discuss. [ 2 ]
2. Arrange the compounds of each set in order of reactivity towards SN2 displacement:

[ 1 x 3 = 3 ]

1. 2-Bromo-2-methylbutane , 1-Bromopentane , 2-Bromopentane.
2. 1-Bromo-3-methylbutane , 2-Bromo-2-methylbutane , 2-Bromo-3-methylbutane.
3. 1-Bromobutane , 1-Bromo-2,2-dimethylpropane , 1-Bromo-2-methylbutane ,

1-Bromo-3-methylbutane.

1. What happens when : [ 1 x 3 = 3 ]
2. Ethyl chloride is treated with Aq. KOH.
3. Methyl Bromide is treated with sodium in the presence of dry ether.
4. Methyl chloride is treated with KCN.
5. How the following conversions can be carried out? [ 1 x 3 = 3 ]

(a) Ethyl chloride to Propanoic acid (b) But-1-ene to n-Butyl iodide

(c) Propene to propan-1-ol

1. Write IUPAC name of the following : [ 1 x 4 = 4 ]

a) Br CH2 CH CH CH2 CH2 CH2 Br (b) o-Br-C6H4 CH (CH3) CH2 CH3

c) CH3 CH CH C (Br) (CH3)2 (d) (CH3)3 C CH2 CH (Br) (C6H5)

1. Explain the following with the help of suitable examples : [ 1 x 4 = 4 ]

(a) Finkelstein Reaction (b) Wurtz Reaction

(c) Wurtz-Fittig Reaction (d) Fittig’s Reaction

1. Write the structure of the major organic product in each case of the following reactions :

[ 1 x 4 = 4 ]

|  |  |
| --- | --- |
| (i) CH3 CH2CH2 Cl + NaI | (ii) (CH3 )3 C Br + KOH |
| (iii) CH3 CH2Br + KCN | (iv) CH3 CH (Br) CH2 CH3 + NaOH |