**I.P.S.Sr.Sec.School**

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

**Monthly Test**

1. Multiple Choice Questions: [ 1 x 6 = 6 ]
2. A primary alkyl halide would prefer to undergo\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| a) SN1 reaction | b) SN2 reaction | c) -Elimination | d) Racemization |

1. Which of the following alkyl halides will undergo SN1reaction most readily?

|  |  |  |  |
| --- | --- | --- | --- |
| a) (CH3)3C – F | b) (CH3)3C – Cl | c) (CH3)3C – Br | d) (CH3)3C – I |

1. Reaction of C6H5CH2Br with aqueous sodium hydroxide follows \_\_\_\_\_\_\_\_\_.
2. SN1 mechanism.
3. SN2 mechanism.
4. Any of the above two depending upon the temperature of reaction.
5. Saytzeff rule.
6. In the addition of HBr to propene in the absence of peroxides, the first step involves the addition of :

|  |  |  |  |
| --- | --- | --- | --- |
| a) H+ | b) Br – | c) H | d) Br |

1. The synthesis of alkyl fluorides is best accomplished by:

|  |  |
| --- | --- |
| a) Finkelstein reaction | b) Swarts reaction |
| c) Free radial fluorination | d) Sandmeyer’s Reaction |

1. For the following : (A) I –  (B) Cl –  (C) Br – , the increasing order of nucleophilicity would be:

|  |  |  |  |
| --- | --- | --- | --- |
| a) C < B < A | b) A < C < B | c) B < C < A | d) A < B < C |

1. What is plane polarized light? [ 1 ]
2. What is an asymmetrical or chiral carbon? [ 1 ]
3. What do prefixes (+) , ( – ) and () before an organic compound mean? [ 1 ]
4. How will you bring the conversation: Methyl bromide to methyl iodide? [ 1 ]
5. Which alkyl halide has the highest density and why? [ 1 ]
6. What happens when CH3 – Br is treated with KCN? [ 1 ]
7. The treatment of alkyl chlorides with aqueous KOH leads to the formation of alcohols but in presence of alcoholic KOH, alkenes are the major products. Explain why? [ 2 ]
8. Arrange each set in order of increasing boiling points : [ 2 ]
9. Bromomethane , Bromoform , Chloromethane , Dibromomethane .
10. 1 – chloropropane , Isopropyl chloride , 1 – Chlorobutane .
11. 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 ]
3. 2-Bromo-2-methylbutane , 1-Bromopentane , 2-Bromopentane.
4. 1-Bromo-3-methylbutane , 2-Bromo-2-methylbutane , 2-Bromo-3-methylbutane.
5. 1-Bromobutane , 1-Bromo-2,2-dimethylpropane , 1-Bromo-2-methylbutane , 1-Bromo-3-methylbutane.
6. How the following conversations can be carried out? [ 1 x 5 = 5 ]

(a) 1 – Bromopropane to 2 – Bromopropane (b) Ethyl chloride to Propanoic acid

(c) 2 – Chloropropane to 1 – propanol (d) Chloroethane to Butane

(e) tert - Butyl bromide to isobutyl bromide