



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-09(CLASS-12)

TOPIC- ALKYL AND ARYL HALIDE

SUBTOPIC-CHEMICAL REACTIONS OF ALKYL AND ARYL HALIDE

SUBJECT - CHEMISTRY

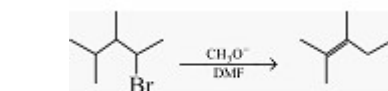
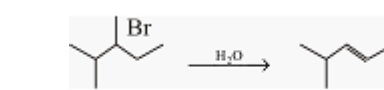
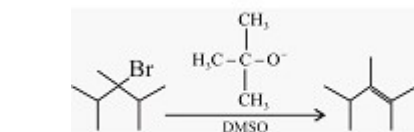
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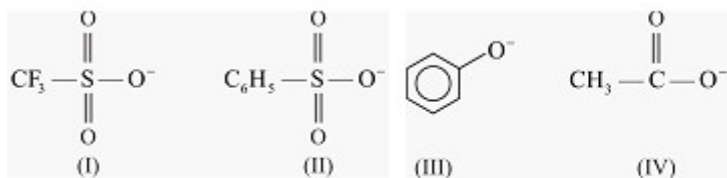
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- 1.1 Which of the following compound gives response to Haloform reaction?
a) HCHO b) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ c) CH_3COCH_3 d) $\text{CH}_3\text{CH}_2\text{COCH}_2\text{CH}_3$
- 1.2 Carbyl amine reaction is given by-
a) Ammonia b) Aliphatic primary amine c) Aliphatic alcohol d) Alkane
- 1.3 Reimer-Tiemann reaction results in the formation of-
a) HCHO b) Benzoic acid c) Salicylic acid d) Salicylaldehyde
- 1.4 Which of the following compounds is most rapidly hydrolyzed by $\text{S}_{\text{N}}1$ mechanism?
a) $\text{C}_6\text{H}_5\text{Cl}$ b) $\text{CH}_2=\text{CH}-\text{CH}_2\text{Cl}$ c) $(\text{C}_6\text{H}_5)_3\text{CCl}$ d) $\text{C}_6\text{H}_5\text{CH}_2\text{Cl}$
- 1.5 Which one of the following species is not an electrophile?
a) ROH b) I^+ c) H^+ d) AlCl_3
- 1.6 Which one among the following is not a good leaving group?
a) HSO_4^- b) Cl^- c) Br^- d) F^-
- 1.7 Chloro benzene undergoes which of the following reaction?
a) Dow's process b) Reimer-Tiemann reaction c) Cannizzaro reaction d) Clemenson reduction
- 1.8 Benzyl chloride on treatment with aq. NH_3 produces-
a) Benzyl amine b) Benzaldehyde c) Both a and b d) Benzyl cyanide
- 1.9 Chloral forms a stable geminal diol due to-
a) Formation of inter molecular H-bonding b) Resonance c) Inductive effect d) Formation of intra molecular H-bonding
- 1.10 Which of the following reactions does not represent the major product given?



- 1.11 Consider the following anions:



When attached to sp^3 -hybridized carbon, their leaving group ability in nucleophilic substitution reaction decreases in the order-

(a) $\text{I} > \text{II} > \text{III} > \text{IV}$ (b) $\text{I} > \text{II} > \text{IV} > \text{III}$ (c) $\text{IV} > \text{I} > \text{II} > \text{III}$ (d) $\text{IV} > \text{III} > \text{II} > \text{I}$

1.12 $\text{CH}_3\text{CH}_2\text{CH}_2\text{Br} + \text{NaCN} \rightarrow \text{CH}_3\text{CH}_2\text{CH}_2\text{CN} + \text{NaBr}$, will be fastest in

(a) ethanol (b) methanol (c) N, N dimethyl formamide (d) Water

1.13 A dihalogen derivative 'X' of a hydrocarbon with three carbon atoms react with aq. KOH and produces hydrocarbon which forms red ppt. with ammonical Cu_2Cl_2 . 'X' gives an aldehyde on reaction with aq. KOH. The compound 'X' is-

(a) 1, 3-Dichloropropane (b) 1, 2-Dichloropropane (c) 2, 2-Dichloropropane
(d) 1, 1-Dichloropropane

1.14 How many chiral compounds are possible on monochlorination of 2-methyl butane?

(a) 2 (b) 4 (c) 6 (d) 8

1.15 $\text{S}_{\text{N}}2$ reaction of alkyl halides lead to-

(a) Retention of configuration (b) Racemisation (c) Inversion of configuration
(d) None of these

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