



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-03

TOPIC- ALKYL AND ARYL HALIDE

SUBTOPIC-CHEMICAL REACTIONS OF ALKYL AND ARYL HALIDE

SUBJECT – CHEMISTRY

DURATION – 30 mins

F.M. - 15

DATE -05.05.20



- 1.1 Which of the following statements about a S_N1 mechanism is true?
a) The reaction is the fastest with 3° halides b) the rate of reaction when the solvent is changed from acetone to ethanol c) The identity of the leaving group does not affect the reaction rate
d) Both a and b
- 1.2 Which of the following undergoes $E1$ reaction most readily?
a) 1-chloropentane b) 2-chloropentane c) 2-chloro-2-methyl butane d) 2,2-dimethyl 1-chloropropane
- 1.3 Which of the following compounds is most rapidly hydrolyzed by S_N1 mechanism?
a) C_6H_5Cl b) $CH_2=CH-CH_2Cl$ c) $(C_6H_5)_3CCl$ d) $C_6H_5CH_2Cl$
- 1.4 Grignard reagent when exposed to moisture-
a) Gets oxidized b) gets hydrolyzed c) gets decomposed to give hydrocarbon d) remains unaffected
- 1.5 Which of the following compound gives positive iodoform test-
a) Formaldehyde b) Methanol c) Pentanone d) Acetone
- 1.6 Which of the following alkyl halides mentioned below undergoes dehydrohalogenation in the presence of a strong base to give 2-pentene as the only alkene product?
a) 1-chloropentane b) 2-chloropentane c) 3-chloropentane d) 1-chloro-2-methylbutane
- 1.7 Pick out the compound which reacts fastest in the presence of $AgNO_3$ -
a) $(CH_3)_3CCl$ b) $(CH_3)_2CHCH_2Cl$ c) $(CH_3)_2CHCl$ d) CH_3CH_2Cl
- 1.8 Which one of the following would react most rapidly with sodium ethoxide to produce an ether?
a) Chlorobenzene b) 2-nitrotoluene c) p-nitrochlorobenzene d) m-(chloromethyl)-toluene
- 1.9 Which of the following is an ambident nucleophile?
a) CN^- b) $-OMe$ c) $-Cl$ d) $-CH_3$
- 1.10 Alkane can be prepared on reaction of Grignard reagent with
a) HCN b) NH_3 c) H_2O d) All of these
- 1.11 CH_3MgBr on treatment with $^{14}CO_2$ generates-
a) CH_3COOH b) $CH_3^{14}COOH$ c) $^{14}CH_3^{14}COOH$ d) $^{14}CH_3COOH$
- 1.12 CH_3CH_2Cl reacts with $AgNO_2$ to form-
a) Nitro ethane b) Ethane nitrite c) Both a and b d) None of these
- 1.13 C_2H_5MgBr reacts with CH_3COCl , followed by hydrolysis to form-
a) 1° alcohol b) 2° alcohol c) 3° alcohol d) Carboxylic acid
- 1.14 Which among the following can't be considered as an organometallic compound-
a) CH_3Li b) CH_3MgBr c) CH_3ONa d) $(CH_3)_2CuLi$
- 1.15 $(CH_3)_2CuLi$ on reaction with C_2H_5Br forms-
a) $CH_3CH_2CH_3$ b) CH_3CH_3 c) $CH_3CH_2CH_2CH_3$ d) CH_4

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