ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

WORKSHEET-04(SOLUTION)

TOPIC- ALKYL AND ARYL HALIDE

SUBTOPIC-PREPARATION OF ALKYL AND ARYL HALIDE

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -06.05.20**

1.1 The halogenation of alkane follows-

a) Free radical mechanism b) carbocationic mechanism c) Carbanionic mechanism d) None of these

Ans. a) Free radical mechanism

1.2 Anti-Markownikoff's addition is followed by-

a) HBr b) HCl c) HI d) HF

Ans. a) HBr

1.3 Which of the following compounds is most rapidly hydrolyzed by S_N2 mechanism?

a) C_6H_5Cl b) $CH_2=CH-CH_2Cl$ c) $(C_6H_5)_3CCl$ d) $C_6H_5CH_2Cl$

Ans. b) $CH_2=CH-CH_2Cl$

1.4 Whish type of reaction mechanism is followed by Anti-Markownikoff's addition-

a) Free radical mechanism b) carbocationic mechanism c) Carbanionic mechanism d) None of these

Ans. a) Free radical mechanism

1.5 Which method is the most appropriate for the preparation of unsymmetrical alkane?

a) Corey-House synthesis b) Wurtz reaction c) Frankland synthesis d) Decarboxylation

Ans. a) Corey-House synthesis

1.6 What will be the products when reactants are alcohol & thionyl chloride in the presence of pyridine?

a) RCl+S+HCl b) $RCl+SO_2+HCl$ c) $RCl+SO_2+H_2O$ d) $RCl+S+H_2O$

Ans. b) $RCl+SO_2+HCl$

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

Ans. a) $(CH_3)_3CCl$

1.8 The ether used in Wurtz synthesis is

a) Acidic b) Dry c) Basic d) aqueous

Ans. b) Dry

1.9 Grignard reagent is reactive due to

a) The presence of halogen atom b) the presence of magnesium atom c) the polarity of C-Mg bond d) all of these

Ans. c) the polarity of C-Mg bond

1.10 Which one of the following species is not an electrophile?

a) NH_3 b) Br^+ c) H^+ d) BF_3

Ans. a) NH_3

1.11 In primary alkyl halides the halogen atom is attached to a carbon which is further attached to how many carbon atoms-

a) One b) Two c) Three d) Four

Ans. **a) One**

1.12 Alkyl halides undergo a type of reaction-

a) Nucleophilic substitution b) Nucleophilic addition c) Elimination d) both a & c

Ans. a) Nucleophilic substitution

1.13 When CO_2 is made to react with ethyl magnesium iodide followed by acid hydrolysis the product formed is-

a) Propane b) propanoic acid c) propanal d) propanol

Ans. b) propanoic acid

1.14 Which C-X bond has the highest bond energy per mole?

a) C-F b) C-Cl c) C-Br d) C-I

Ans**. a) C-F**

1.15 Which one among the following is not a good leaving group?

a) HSO_4^- b) Cl^- c) OH^- d) Br^-

Ans. d) Br^-

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