ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-10(SOLUTION)

CLASS-12

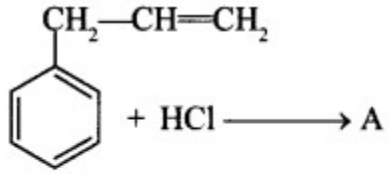
TOPIC- ALKYL AND ARYL HALIDE

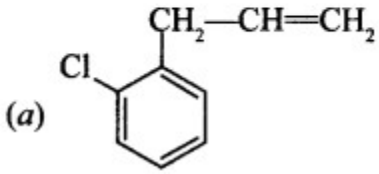
SUBTOPIC- CHEMICAL REACTIONS OF ALKYL AND ARYL HALIDE

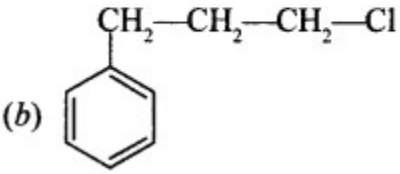
SUBJECT – CHEMISTRY **F.M. - 15**

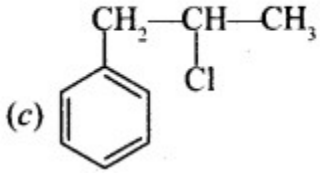
DURATION – 30 mins **DATE -13.05.20**

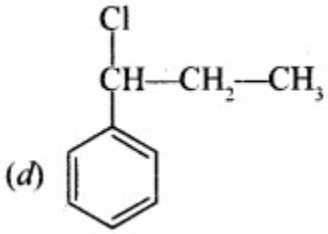
1.1 What is 'A' in the following reaction?



(a) 

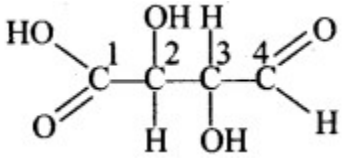
(b) 

(c) 

(d) 

Ans. C

1.2 Which of the carbon atoms present in the molecule given below are asymmetric?



(a) 1, 2, 3, 4 (b) 2, 3 (c) 1, 4 (d) 1, 2, 3

Ans. b

1.3 S_N1 reaction of alkyl halides lead to

(a) Retention of configuration (b) Racemisation (c) Inversion of configuration

(d) None of these

Ans. b

1.4 Chloropicrin is formed by the reaction of-

(a) Steam on carbon tetrachloride (b) nitric acid on chlorobenzene

(c) chlorine on picric acid (d) nitric acid on chloroform

Ans. d

1.5 Fittig reaction can be used to prepare-

(a) Toluene (b) Acetophenone (c) Diphenyl (d) Chlorobenzene

Ans. C

1.6 CH_3MgI reacts with CH_3OCH_3 to form-

a) Alcohol b) No product c) Water d) Ester

Ans. b

1.7 Identify the end product (C) in the following sequence:

$$C_2H_5OH \xrightarrow[\text{Pyridine}]{SOCl_2} A \xrightarrow{KCN\ (alc.)} B \xrightarrow{2H_2O/H^+} C$$

(a) $C_2H_5CH_2NH_2$ (b) $C_2H_5CONH_2$

(c) C_2H_5COOH (d) $C_2H_5NH_2 + HCOOH$

Ans. C

1.8

$$CH_3CH_2CH_2Cl \xrightarrow{alc.\ KOH} B \xrightarrow{HBr} C \xrightarrow{Na/ether} D$$

In the above reaction, the product "D" is-

(a) Propane (b) 2, 3-Dimethylbutane (c) Hexane (d) Allyl bromide

Ans. b

1.9 Grignard reagent (CH_3MgX) on treatment with $CH_3CH_2CH_2C^{14}OOH$-

a) CH_3D b) $C^{14}H_4$ c) CH_4 d) Both b and c

Ans. C

1.10 In the following sequence of reactions:

$$C_2H_5Br \xrightarrow{AgCN} X \xrightarrow{Reduction} Y;\ Y\ is$$

(a) n-propylamine (b) isopropylamine (c) ethylamine (d) ethylmethylamine

Ans. d

1.11 $^{14}CH_3MgBr$ on treatment with $^{14}CO_2$ generates-

a) CH_3COOH b) $CH_3{}^{14}COOH$ c) $^{14}CH_3{}^{14}COOH$ d) $^{14}CH_3COOH$

Ans. C

1.12 CH_3MgI reacts with CH_3COCl, followed by hydrolysis to form-

a) 3^O Alcohol b) 2^O Alcohol c) Water d) 1^O Alcohol

Ans.

1.13 CH_3MgI reacts with CH_3CH_2CN, followed by hydrolysis to form-

a) $(CH_3)_3COH$ b) $CH_3CH_2(CH_3)_2COH$ c) CH_3CH_2OH d) $(CH_3)_2CHOH$

Ans. b

1.14 Identify X and Y in the following sequence

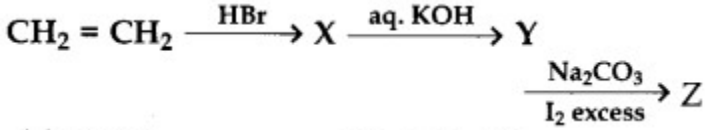
$$C_2H_5Br \xrightarrow{X} Product \xrightarrow{Y} C_3H_7NH_2$$

(a) X = KCN, Y = $LiAlH_4$ (b) X = KCN, Y = H_3O^+ (c) X = CH_3Cl, Y = $AlCl_3$, HCl

(d) X = CH_3NH_2, Y = $[HNO_2]$

Ans. a

1.15 Identify Z in the following series:



(a) C_2H_5I
(b) C_2H_5OH
(c) CHI_3
(d) CH_3CHO

Ans. C

PREPARED BY: MR. ARNAB PAUL CHOWDHURY