ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION-16(CLASS-12)

TOPIC- ALCOHOL, PHENOL AND ETHER

SUBTOPIC-GENERAL PROPERTIES AND PREPARATION OF ALCOHOL

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -10.06.20**

1.1 **An organic compound A containing C, H and O has a pleasant odour with boiling point of 78°C. On boiling A with concentrated H_2SO_4, a colourless gas is produced gas is produced which decolourises bromine water and alkaline $KMnO_4$. The organic liquid A is-**

(a) $C_2H_5COOCH_3$

(b) C_2H_5OH

(c) C_2H_5Cl

(d) C_2H_6

Ans. b

1.2 **The heating of phenyl methyl ether with HI produces-**

(a) Iodobenzene

(b) Phenol

(c) Benzene

(d) Ethyl chloride

Ans. b

1.3 **Which of the following gives positive iodoform test?**

(a) $C_6H_5CH_2CH_2OH$

(b) $CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_2OH$

(c) $PhCHOHCH_3$

(d) $CH_3CH_2CH(OH)\,CH_2CH_3$

Ans. c

1.4

$$C_6H_5CH_2\,CH(OH)\,CH(CH_3)_2 \xrightarrow{\text{Conc. } H_2SO_4} \text{is}$$

(a) C_6H_5, $CH(CH_3)_2$, $C{=}C$, H, H

(b) $H_5C_6CH_2CH_2$, $C{=}CH_2$, CH_3

(c) H_5C_6, H, $C{=}C$, H, $CH(CH_3)_2$

(d) $C_6H_5CH_2$, CH_3, $C{=}C$, H, CH_3

Ans. c

1.5 **The product 'Z' is-**

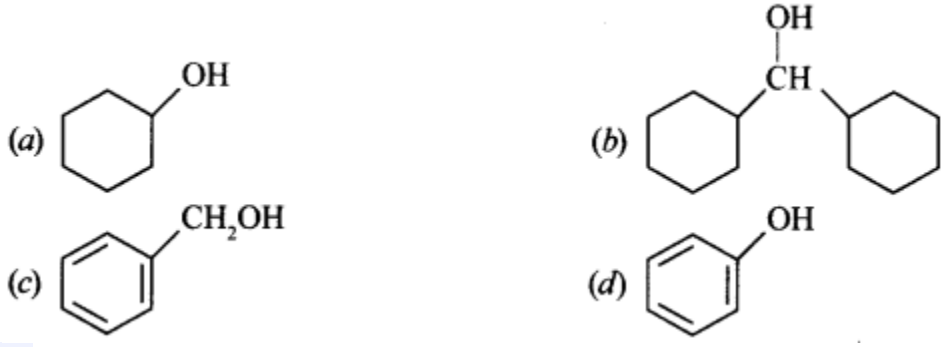
$$\text{Phenol} \xrightarrow{\text{Zn, dust}} \text{'X'} \xrightarrow[\text{Anhy. } AlCl_3]{CH_3Cl} \text{'Y'} \xrightarrow[KMnO_4]{\text{Alkaline}} \text{'Z'}$$

(a) Benzaldehyde

(b) Benzoic acid
(c) Benzene
(d) Toluene

Ans. b

1.6 **Which one of the following compounds has the most acid nature?**



Ans. c

1.7 **Among the following sets of reactants which one produces phenitol?**

(a) CH_3CHO; RMgX
(b) C_6H_5OH; NaOH, CH_3CH_2I
(c) C_6H_5OH, neutral $FeCl_3$
(d) C_6H_5 —CH_3; CH_3COCl; $AlCl_3$

Ans. b

1.8 **Which one is prepared on large scale by the fermentation of starch or molasses?**

(a) Methanol (b) Acetone (c) Ethanol (d) Acetaldehyde

Ans. c

1.9 **Which one of the following compound is obtained by the oxidation of primary alcohol with nascent oxygen?**

(a) Alkanal **(b)** Carboxylic acid **(c)** primary amine **(d)** Ketone

Ans. a

1.10 **Which one is the correct order of reactivity of different types of alcohol?**

(a) $1^o > 2^o > 3^o$ (b) $3^o > 2^o > 1^o$ (c) $1^o > 3^o > 2^o$ (d) $2^o > 1^o > 3^o$

Ans. b

1.11 **Which bond is cleaved when alcohols are converted to carbonyl compounds?**

(a) O-H bond only (b) Both O-H and C-O bond
(c) C-O bond only (d) Both O-H and C-H bond

Ans. c

1.12**Which class of compounds can be prepared by the oxidation of alcohols?**

(a) Ester (b) Carboxylic acid(c) alkoxide (d) alkene

Ans. b

1.13 **Which one of the following is the general method of preparation of alcohols?**

(a) By the hydrolysis of alkyl halide with aqueous alkali

(b) By the hydrolysis of ester with aqueous alkali or carboxylic acid

(c) By reduction of aldehydes or ketones by nascent hydrogen or By catalytic hydration of alkene

(d) All of the above

Ans. d

1.14 **Which class of compounds cannot be prepared by the cleavage of O-H bond of alcohols?**

(a) Esters (b) Alkanes

(c) Alkoxides (d) Alkenes

Ans. b

1.15 **Which class of compounds is prepared by the cleavage of O-H bond of alcohols?**

(a) Alkyl halides (b) Amines

(c) Carbonyl compounds (d) Esters

Ans. a

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