DPP

DAILY PRACTICE PROBLEMS

Class: XIIth

Date:

Solutions

Subject: CHEMISTRY

DPP No.: 10

Topic :-

$$C_2H_5OH + [O] \xrightarrow{PCC} CH_3CHO$$

$$(X)$$
 (Y)

$$CH_3CHO + 4NaOH + 3I_2 \rightarrow CHI_3 + HCOONa + 3H_2O + 3NaI$$

(Y)

(yellow ppt

tri-iodomethane)

2 **(c)**

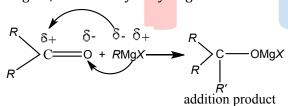
$$C_2H_4 + H_2SO_4 \rightarrow C_2H_5HSO_4 \xrightarrow{HOH} C_2H_5OH$$

5 **(b**

Tertiary alcohols show replacement of —OH gp. more readily.

6 **(c)**

Ketones give an addition product having more number of carbon atoms with Grignard reagent, which on hydrolysis gives an alcohol (3°).



$$\frac{\text{H}_2\text{O}}{\text{-Mg}X(\text{OH})} \xrightarrow{R} \text{C} \xrightarrow{R'} \text{OH}$$
tertiary alcohol

Formaldehyde gives primary alcohol with Grignard reagent while any other aldehyde except formaldehyde give secondary alcohol.

7 **(a)**

$$CH_3OH \xrightarrow{HI} CH_3I$$

8 **(b**)

Perspex rubber is polymethyl methyl acrylate (PMMA) is obtained by methyl acrylate obtained as:

$$\begin{array}{c} \operatorname{CH_2=CCOOH} + \operatorname{HOCH_3} \longrightarrow \operatorname{CH_2=CCOOH} \\ | & | \\ \operatorname{CH_3} & \operatorname{CH_3} \end{array}$$

10 (b)

> Here, ether is the solvent. Being less polar, it favours $S_N 2$ reaction and the nucleophile $I^$ attacks the 1^0 carbon of CH_3 .

$$\begin{array}{c|c} & & & CH_3 \\ \hline I + CH_3 & & & CH_3 \\ \hline & & CH_3 \\ \hline & & CH_3 \\ \hline \end{array} \begin{array}{c} & & OH \\ \hline & & CH_3 \\ \hline & & CH_3 \\ \hline \end{array}$$

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$$C_2H_5OC_2H_5 + HI^{\Delta}_{2}C_2H_5I + H_2O$$

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Due to more sites available for H-bonding.

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The fermented liquid is technically called wash containing 6-10% ethanol, 3-5% glycerol, higher alcohols (fusel oils), acetaldehyde, etc.

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$$CH_3COOH + C_2H_5OH \xrightarrow{H_2SO_4} CH_3COOC_2H_5 + H_2O$$

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 $C_2H_5OH + HOOCCH_3 \longrightarrow C_2H_5OOCCH_3$ Ester possess fruity smell.

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Phenol (C₆H₅OH) is carbolic acid.

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	A	С	В	D	В	C	A	В	A	В
Q.	11	12	13	14	15	16	17	18	19	20
A.	D	D	C	D	A	C	C	D	В	C

