

.CHO

Daily Tutorial Sheet-9	Level-2
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There are two possible products: 106.(B)

$$\begin{array}{c|c} CHO & Na\bar{O}H \\ CHO & H^{+} \end{array} & \begin{array}{c} CHO & \\ CHO & H^{-} \end{array} & \begin{array}{c} CHO & \\ CHO$$

Note: In product (1), - CHO is attached to phenyl group which decreases its reactivity (via + M effect) and eventually its intermediate is not a good hydride donor.

While in product (II), - CHO is attached to alkyl group side which is more electrophilic against -HO (as Nucleophile) and its intermediate is better H⁻ (hydride donor) forming acid.

active methylene group
$$H_2N-NH_2/H^+$$
 $N-N$ cyclic imine

* It does not give Tollen's or Fehling solution test.

A, B, C are correct and D is incorrect. Acetone is more reactive than acetophenone with $NaHSO_3$. 108.(ABC)

109.(BCD) Here acid-base reaction with NaOH also includes Aldol condensation, because in the first step NaOH abstracts α – Hydrogen, Option -A does not have acidic 'H', so undergo Cannizzaro's reaction.

CHO Ammonical AgNO₃ COOH

Fehling solution or
$$H_2CrO_4$$
 [All of these do not oxidise $C = C$ bond]

CHO HO.

Reaction

$$\begin{array}{c} \text{OH} \\ \text{CHO} \\ \text{CH} \\ \text{O} \\ \text{O} \\ \text{CH} \\ \text{Or} \\ \text{A} \\ \end{array} \begin{array}{c} \text{CH} \\ \text{OH} \\ \text{$$



(Similar to Intramolecular Cannizzaro Reaction, where migration of phenide, (Ph^-) ion occurs instead of hydride ion)

 $\begin{tabular}{ll} \bf 113. (ABCD) & Compounds containing adjacent -OH \& CO groups are also cleaved by HIO_4, apart from viccinal diols. \end{tabular}$

$$\begin{array}{c} \operatorname{CH_3} \\ \operatorname{CO} \\ \cdots + \cdots \\ \operatorname{CHOH} \longrightarrow \operatorname{CH_3COOH} + \operatorname{HCOOH} + \operatorname{HCHO} \\ \cdots + \cdots \\ \operatorname{CH_2OH} \end{array}$$

(B)
$$CH_3CH(OH) + CH(OH)CH_3 \longrightarrow 2CH_3CHO$$

CHO

MeO

(X)

MeO

H

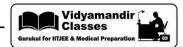
$$-H_2O$$

H

 H
 $-H_2O$

H

 $COOH$
 $COOH$



115.(B)
$$\begin{array}{c} CH_3 & O \\ CH_3 & C \\ CH_3 & C \\ CH_3 & C \\ CH_3 & C \\ CH_2 & C \\ CH_3 & C \\ CH_4 & C \\ CH_5 &$$