DPP
DAILY PRACTICE PROBLEMS

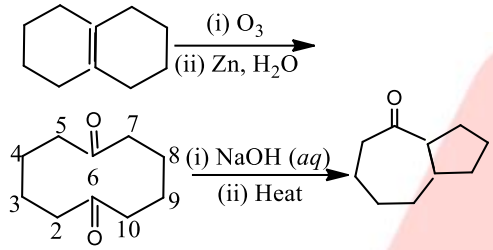
Class : XIIth
Date :

Solutio

Subject : CHEMISTRY
DPP No. : 3

Topic :- Aldehydes, Ketones & Carboxylic Acids

3 **(a)**



For aldol condensation C-5 and C-7 can attack to C-1 similarly C-2 and C-10 can attack to C-6 but all give same product.

4 **(c)**

$(CH_3CH_2COO)_2Ca \longrightarrow CH_3CH_2COCH_2CH_3 + CaCO_3$

6 **(d)**

Aldehyde containing no α-H-atom on reaction with 50% NaOH or KOH, undergo disproportionation to give an alcohol and Na or K salt of an acid. This reaction is called Cannizaro reaction. Acetaldehyde does not show Cannizaro reaction due to presence of α-hydrogen atom

7 **(a)**

$$CH_3CH_2CH_2OH \xrightarrow[H_2So_4]{K_2Cr_2O_7} \underset{(B)}{CH_3CH_2CHO}$$

1.

propanol propanal

$$\xrightarrow{H_2NCONHNH_2} \underset{(C)}{CH_3CH_2CH = NNHCONH_2}$$

8 **(b)**

$$CH_3CN \xrightarrow{HOH} CH_3COOH$$

12 **(c)**

40% aqueous solution of formaldehyde (methanal) is called as formalin.

Note Formalin used as disinfectant and preservative for biological specimens.

13 **(a)**

$LiAlH_4$ is a strong reducing agent, which reduces carboxylic acids to corresponding primary alcohols as well as alkyl halide to alkenes, but donot reduce double bond

$$BrCH_2CH_2CH_2COOH \xrightarrow{LiAlH_4} CH_3CH_2CH_2CH_2OH$$

14 **(d)**

The strength of carboxylic acid depends upon the nature of the electron withdrawing halogen atom. Greater the electron withdrawing influence of the halogen atom stronger will be the acid. The electron withdrawing effect of the halogen decreases as

$F > Cl > Br > I$

Hence, CH_2(I). COOH is the weakest acid among these.

15 **(c)**

$$C_4H_9OCl \xrightarrow{NH_3} C_4H_9ONH_2 \xrightarrow[KOH]{Br_2^+} CH_3CH_2CH_2NH_2$$

Thus, C_4H_9OCl should be $CH_3CH_2CH_2COCl$.

16 **(c)**

$$CH_3CH_2CHOHCH_3 \xrightarrow{[O]} CH_3CH_2COCH_3$$

20 **(d)**

$$R - CHO + 2CuO \longrightarrow RCOOH + Cu_2O$$

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