

The keto-ester (*A*) does not give haloform reaction inspite of the presence of $CH_3CO -$ group in it. The reason is the presence of active methylene group (*ie*, $-CH_2 -$), which prevents the conversion of $CH_3CO -$ to $CX_3CO -$

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Formaldehyde reacts with NH_3 to form urotropine which is used as medicine to cure urinary infections.

 $6HCHO + 4NH_3 \rightarrow (CH_2)_6N_4$ Formaldehyde ammonia hexamethylene tetramine urotropine

4 **(d)**

(c)

Aldehydes and ketones having α -hydorgen atom undergo aldol condensation in presence of dilute base

CH₃-CH₂-CHO + H-CH-CHO
$$\xrightarrow{\text{Dil. alkali}}$$

CH₃
CH₃CH₂-CH-CH-CHO
OH CH₃

5 (d)

CH₃CHO^[0]CH₃COOH

6 **(c)**

Acetic acid reacts with PCl_5 to form acetyl chloride. $CH_3COOH + PCl_5 \rightarrow CH_3COCl + POCl_3 + HCl$ acetyl chloride

9 (d)

C₆H₅COOH is solid, less soluble in water and burn with smoky flame.

11 **(a)**

 $CH_2Cl_2 \xrightarrow{HOH} HCHO$

12 **(b)**

When aromatic carboxylic acids are subjected to Birch reduction (ie, Na or K in NH₃ and an alcohol), 1, 4-additional of hydrogen takes place and 1, 4-cyclohexadiene carboxylic acids are produced



13 **(c)**

Picric acid is 2,4,6-trinitrophenol.

14 **(c)**

Herbicides are the substances that kills plants or inhibit their growth. Selective herbicides affect only particular plant types, making it possible to attack weeds growing among cultivated plants.

15 **(d)**

Carbonyl compounds are reduced to corresponding alkanes with (Zn+ conc.HCl). It is called Clemmensen reduction.

$$0$$
||
$$CH_3CH_2.C - CH_3 \xrightarrow{Zn(Hg) + HCl} CH_3CH_2CH_2CH_3$$
(c)

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Aluminium tertiary butoxide is an oxidising agent used for the oxidation of secondary alcohols into ketones.

$$\begin{array}{c} CH_3 - CH_2 - CH - CH_2 - CH_3 \\ \\ \\ OH \\ 3 \text{-pentanol} \\ \underline{AI[OCMe_3]_3/acetone} \\ CH_3 - CH_2 - C - CH_2 - CH_3 \\ \\ \\ \\ \\ \\ O \\ 3 \text{-pentanone} \end{array}$$

18 **(b)**

The silver salt of fatty acid on refluxing with an alkyl halide, give an ester.

$$RCOOAg + R'Cl \xrightarrow{\Delta} RCOOR' + AgCl$$

ester

(a)

(c)

 $CH_3COCH_3 \xrightarrow{SeO_2} CH_3CO \cdot CHO + Se + H_2O$

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1, 2 diketone undergoes rearrangement to α -hydroxy carboxylic acid in presence of base. This reaction is known as benzilic acid rearrangement



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