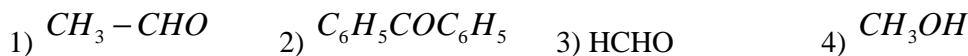


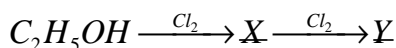
## ALDEHYDES, KETONES and CARBOXYLIC ACIDS

1. Which one of the following gives yellow precipitate with iodine and NaOH solution ?

(EAMCET-2010)



2. What are X and Y in the following reaction sequence ?



(EAMCET-2009)



3. Acetone on addition to methyl magnesium bromide forms a complex, which on decomposition with acid gives X and  $Mg(OH)Br$ . Which one of the following is X ?

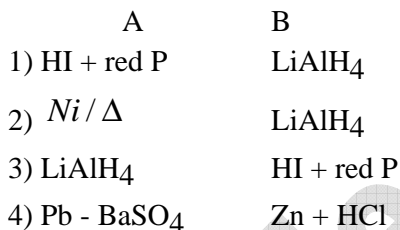
(EAMCET-2008)



4. Identify A and B in the following reaction



(EAMCET-2008)



In the above reactions

(EAMCET-2007)

'A' and 'B' respectively, are



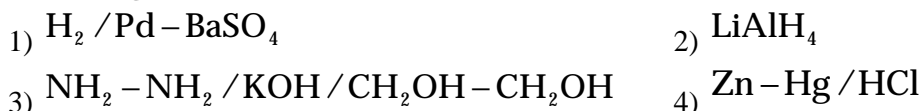
6. An organic compound X on treatment with pyridium dichromate in dichloromethane gives compound Y. Compound Y reacts with  $I_2$  and alkali to form iodoform. The compound X is

(EAMCET-2007)

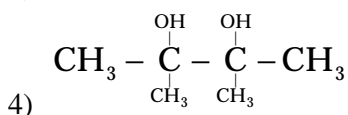
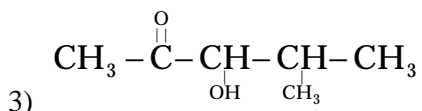
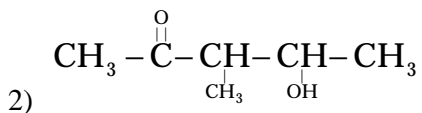
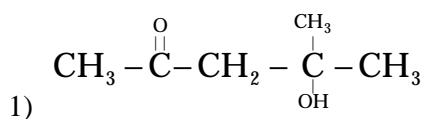


7. What reagent is used in Rosenmund's reduction?

(EAMCET-2006)



8. Which of the products formed when acetone is reacted with barium hydroxide solution?  
(EAMCET-2006)



9. Which of the following reagents converts both acetaldehyde and acetone to alkanes?  
(EAMCET 2006)

- 1) Ni / H<sub>2</sub>                                 2) LiAlH<sub>4</sub>  
3) I<sub>2</sub> / NaOH                              4) Zn - Hg / Con.HCl

10. 3-Hydroxybutanal is formed when(X) reacts with (Y) in dilute (Z) solution. What are X, Y and Z  
(EAMCET- 2005)

	X	Y	Z
1.	CH <sub>3</sub> CHO	(CH <sub>3</sub> ) <sub>2</sub> CO,	NaOH
2	CH <sub>3</sub> CHO	CH <sub>3</sub> CHO	NaCl
3.	(CH <sub>3</sub> ) <sub>2</sub> CO,	(CH <sub>3</sub> ) <sub>2</sub> CO,	HCl
4.	CH <sub>3</sub> CHO,	CH <sub>3</sub> CHO,	NaOH

11. A compound 'X' undergoes reaction with LiAlH<sub>4</sub> to yield 'Y'. When vapours of 'Y' are passed over freshly reduced copper at 300<sup>0</sup> C. 'X' is formed what is 'Y'?  
(EAMCET-2005)

- 1) CH<sub>3</sub>COCH<sub>3</sub>                                 2) CH<sub>3</sub>CHO  
3) CH<sub>3</sub>CH<sub>2</sub>OH                                 4) CH<sub>3</sub>-O-CH<sub>3</sub>

12. Which of the following reagents can form a phenyl hydrazone with alkanone ? (EAMCET - 2004)

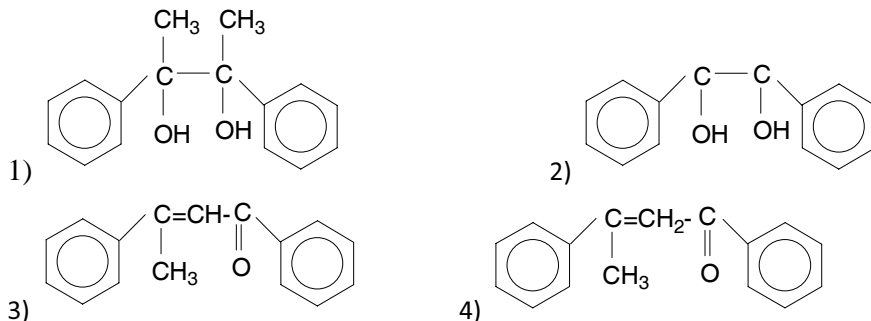
- 1)  $\overset{\oplus}{\text{N}}\text{H}_3\text{OHC}\overset{\oplus}{\text{I}}$                                  2) PhNHNH<sub>2</sub>  
3) NH<sub>2</sub>NHCONH<sub>2</sub>                             4) HCN

13. When ethyl alcohol is passed over red hot copper at the formula of the product formed is  
(EAMCET 2003)

- 1) CH<sub>3</sub>CHO             2) CH<sub>3</sub>COCH<sub>3</sub>             3) C<sub>2</sub>H<sub>4</sub>             4) CH<sub>3</sub>COOH

14. Acetaldehyde forms white crystalline precipitate on mixing with a .....solution of .....  
(EAMCET 2002)
- 1) Acidic Zn, Hg  
2) Alcoholic  
3) Saturated, aqueous  $\text{NaHSO}_3$   
4) Aqueous NaCl
15. The chemicals used for preparing acetophenone are  
(EAMCET 2002)
- A)  $\text{C}_6\text{H}_6$   
B)  $\text{CH}_3\text{COOCH}_3$   
C)  $\text{CH}_3\text{COCl}$   
D) Anhydrous
- 1) A,B,C  
2) B,C,D  
3) A,C,D  
4) A,B,D
16. Dry distillation of a mixture of calcium acetate and calcium formate forms.  
(EAMCET2001)
- 1) Methanol  
2) Ethanal  
3) Ethanol  
4) Acetone
17. Which of the following converts acetone to acetone oxime ?  
(EAMCET2000)
- 1)  $\text{H}_2\text{N-NH}_2$   
2) 2, 4-DNP  
3)  $\text{C}_6\text{H}_5\text{NHNH}_2$   
4)  $\text{NH}_2\text{OH}$
18. Identify A and B in the following reaction  
(EAMCET-2008)
- $$\text{CH}_3 - \text{CH}_3 \xleftarrow{\text{B}} \text{CH}_3\text{COOH} \xrightarrow{\text{A}} \text{CH}_3\text{CH}_2\text{OH}$$
- A                      B
- 1)  $\text{HI} + \text{red P}$   
2)  $\text{Ni} / \Delta$   
3)  $\text{LiAlH}_4$   
4)  $\text{Pb} - \text{BaSO}_4$
- B
- 1)  $\text{LiAlH}_4$   
2)  $\text{HI} + \text{red P}$   
3)  $\text{Zn} + \text{HCl}$   
4)  $\text{LiAlH}_4$
19.  $\text{CH}_3\text{COOH} \xrightarrow{\text{LiAlH}_4} \text{A}$      $\text{A} + \text{CH}_3\text{COOH} \xrightarrow{\text{H}_2\text{O}^+} \text{B} + \text{H}_2\text{O}$  In the above reactions 'A' and 'B' respectively, are  
(EAMCET-2007)
- 1)  $\text{CH}_3\text{COOC}_2\text{H}_5, \text{C}_2\text{H}_5\text{OH}$   
2)  $\text{CH}_3\text{CHO}, \text{C}_2\text{H}_5\text{OH}$   
3)  $\text{C}_2\text{H}_5\text{OH}, \text{CH}_3\text{CHO}$   
4)  $\text{C}_2\text{H}_5\text{OH}, \text{CH}_3\text{COOC}_2\text{H}_5$
20. Which of the following is a pair of functional isomers ?  
(EAMCET2005)
- 1)  $\text{CH}_3\text{COCH}_3, \text{CH}_3\text{CHO}$   
2)  $\text{C}_2\text{H}_5\text{CO}_2\text{H}, \text{CH}_3\text{CO}_2\text{CH}_3$   
3)  $\text{C}_2\text{H}_5\text{CO}_2\text{H}, \text{CH}_3\text{CO}_2\text{C}_2\text{H}_5$   
4)  $\text{CH}_3\text{CO}_2\text{H}, \text{CH}_3\text{CHO}$
21. Acid hydrolysis of X yields two different organic compounds. Which one of the following is X ?  
(EAMCET2003)
- 1)  $\text{CH}_3\text{COOH}$   
2)  $\text{CH}_3\text{CONH}_2$   
3)  $\text{CH}_3\text{COOC}_2\text{H}_5$   
4)  $(\text{CH}_3\text{CO})_2\text{O}$
22. In the reaction sequence,  $\text{C}_2\text{H}_5\text{Cl} + \text{KCN}$ . What is the molecular formula of Y ?  
(EAMCET2003)
- 1)  $\text{C}_3\text{H}_6\text{O}_2$   
2)  $\text{C}_3\text{H}_5\text{N}$   
3)  $\text{C}_2\text{H}_4\text{O}_2$   
4)  $\text{C}_2\text{H}_6\text{O}$
23. In the following reaction, X and Y are respectively :  $\text{CH}_3\text{COOH} + \text{NH}_3 \rightarrow \text{X} \xrightarrow{\Delta} \text{Y} + \text{H}_2\text{O}$   
(EAMCET2002)
- 1)  $\text{CH}_3\text{CONH}_2, \text{CH}_4$   
2)  $\text{CH}_3\text{COONH}_4, \text{CH}_3\text{CONH}_2$   
3)  $\text{CH}_3\text{CONH}_2, \text{CH}_3\text{COOH}$   
4)  $\text{CH}_3\text{NH}_2, \text{CH}_3\text{CONH}_2$

24. Aceto phenone when reacted with a base  $C_2H_5ONa$ , yields a stable compound which has the structure (AIPMT 2008)



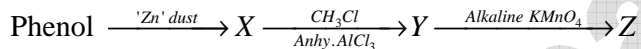
25. Propanoic acid with  $Br_2/P$  yields a dibromo product. Its structure would be (AIPMT 2009)

- 1)  $CH_3 - CBr_2 - COOH$                       2)  $CH_2Br - CH_2Br - COOH$   
3)  $CHBr_2 - CH_2 - COOH$                       4)  $CH_2Br - CH_2 - COBr$

26. The relative reactivities of acyl compounds towards nucleophilic substitution are in the order of (AIPMT 2008)

- 1) Acid anhydride > Amide > Ester > Acyl chloride  
2) Acyl chloride > ester > Acid anhydride > Amide  
3) Acyl chloride > Acid anhydride > Ester > Amide  
4) Ester > Acyl chloride > Amide > Acid anhydride

27. What is 'Z' in the following sequence of reactions (AIPMT 2009)



- 1) Benzene                      2) Toulene                      3) Benzaldehyde                      4) Benzoic acid

**KEY**

- 1) 1                      2) 3                      3) 2                      4) 3                      5) 4                      6) 1                      7) 1                      8) 1                      9) 4                      10) 4  
11) 3                      12) 2                      13) 1                      14) 3                      15) 3                      16) 2                      17) 4                      18) 3                      19) 4                      20) 2  
21) 3                      22) 1                      23) 2                      24) 3                      25) 1                      26) 3                      27) 4