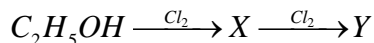


ORGANIC CHEMISTRY - I

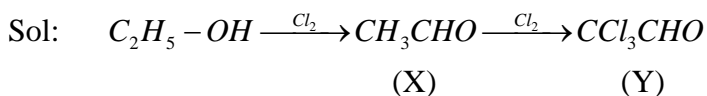
ALCOHOLS ETHERS AND PHENOLS PREVIOUS EAMCET BITS

1. What are the X and Y in the following reaction sequence? (2009 E)

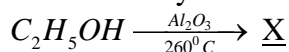


- 1) C_2H_5Cl, CH_3CHO 2) CH_3CHO, CH_3COOH
 3) CH_3CHO, CCl_3CHO 4) C_2H_5Cl, CCl_3CHO

Ans : 3



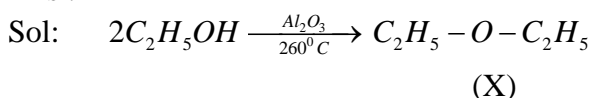
2. What is the hybridisation state (s) of the atoms in X formed in the following reaction



(Vapours)

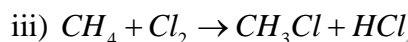
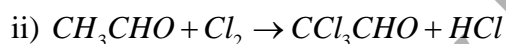
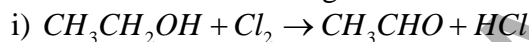
- 1) Sp^3 only 2) Sp^2 only Sp^3 3) Sp^2 only 4) Sp only (2009 M)

Ans : 1



Atoms have Sp^3 hybridisation

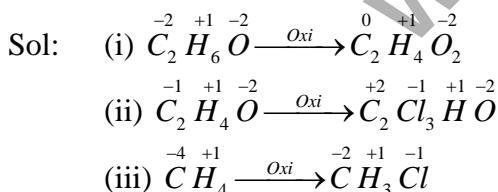
3. In which of the following reaction chlorine acts as an oxidizing agent (2008 E)



The correct answer is

- 1) i only 2) ii only 3) i and iii 4) i, ii and iii

Ans : 4



4. Identify A and B in the following reaction (2008 E)

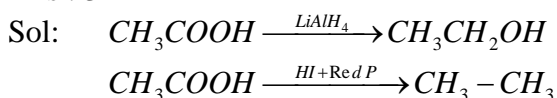


A

B

- 1) $HI + Red P$ $LiAlH_4$
 2) NI / Δ $LiAlH_4$
 3) $LiAlH_4$ $HI + Red P$
 4) $Pd - BaSO_4$ $Zn + HCl$

Ans : 3

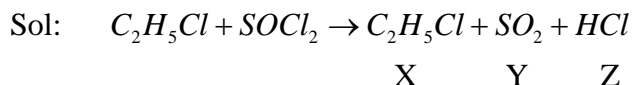




In this reaction X, Y and Z respectively are (2008 M)

- | | |
|----------------------------|--------------------------|
| 1) $C_2H_4Cl_2, SO_2, HCl$ | 2) C_2H_5Cl, SO_2, HCl |
| 3) $C_2H_5Cl, SOCl, HCl$ | 4) C_2H_4, SO_2, Cl_2 |

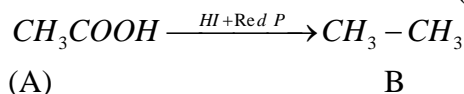
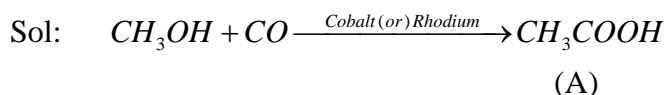
Ans : 2



6. Methyl alcohol when reacted with carbon monoxide using cobalt (or) Rhodium as catalyst, compound A is formed, A on heating with HI in the presence of red phosphorous as catalyst B is formed identify B (2007 M)

- | | | | |
|---------------|--------------|----------------|------------------|
| 1) CH_3COOH | 2) CH_3CHO | 3) CH_3CH_2I | 4) $CH_3 - CH_3$ |
|---------------|--------------|----------------|------------------|

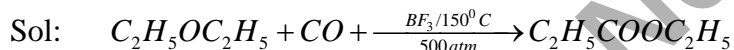
Ans : 4



7. Which of the following compounds when heated with CO at 150°C and 500 atm pressure in the presence of BF_3 form ethyl propionate (2006 E)

- | | | | |
|---------------|----------------|--------------------|------------------|
| 1) C_2H_5OH | 2) CH_3OCH_3 | 3) $C_2H_5OC_2H_5$ | 4) $CH_3OC_2H_5$ |
|---------------|----------------|--------------------|------------------|

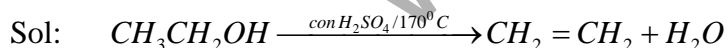
Ans : 3



8. In which of the following reaction ethylene is formed (2006 M)

- | | |
|---------------------------------------|---|
| 1) $C_2H_5OH, dil H_2SO_4, 0^\circ C$ | 2) $CH_3OH, con H_2SO_4, 170^\circ C$ |
| 3) C_2H_5Br, Zn, Δ | 4) $C_2H_5OH, con H_2SO_4, 170^\circ C$ |

Ans : 4



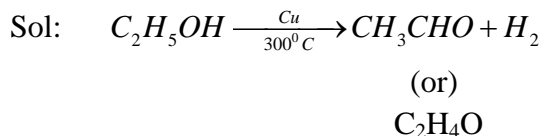
9. In the reaction $C_2H_5OH \xrightarrow[300^\circ C]{Cu} X$ (2005 E)

(Vapour)

The molecular formula of X is

- | | | | |
|--------------|-----------------|--------------|-------------|
| 1) C_4H_6O | 2) $C_4H_{10}O$ | 3) C_2H_4O | 4) C_2H_6 |
|--------------|-----------------|--------------|-------------|

Ans : 3



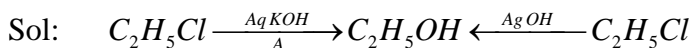
10. Identify A and B in the following reaction $C_2H_5Cl \xrightarrow{A} C_2H_5OH \xleftarrow{B} C_2H_5Cl$

(2004 E)

- 1) A = aqueous KOH B = AgOH
2) A = alcoholic KOH B = aqueous NaOH

3) A = aqueous NaOH B = AgNO₂4) A = AgNO₂ B = KNO₂

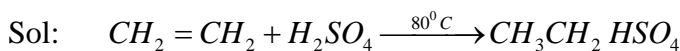
Ans : 1



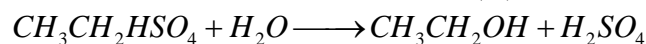
11. What are X and Y in the reaction

1) C₂H₅, C₂H₅OH2) C₂H₄, C₂H₅OH3) C₂H₅, OSO₃H, C₂H₅OH4) C₂H₂, CH₃CHO

Ans : 3



(X)



(Y)

12. In the reaction $C_2H_5OC_2H_5 + CO \xrightarrow[150^\circ C, 500 \text{ atm}]{BF_3} X$ (2003 E)

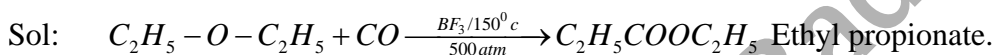
1) Diethyl carbonate

2) Ethyl carbonate

3) Diethyl peroxide

4) Ethyl propionate

Ans : 4



13. Canned heat is prepared by mixing ----- and ----- at high pressure (2003 M)

1) C₂H₅OH, HI/ Red P2) C₂H₂, O₂3) C₂H₅OH, Ca(OH)₂4) C₃H₆O, CaOCl₂

Ans : 3

Sol: Ethyl alcohol is mixed with saturated solution of calcium hydroxide to give a solid gel canned heat.

14. The products formed when diethyl ether is reacted with cold HI are (2002 E)

1) C₂H₅I + C₂H₅OH2) 2C₂H₅I + H₂O3) 2C₂H₅OH4) C₂H₅-O-O-C₂H₅ + H₂O

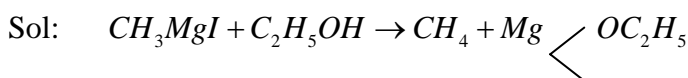
Ans : 1



15. Which one of the following compounds converts methyl magnesium Iodide to methane in one step (2002 M)

1) C₂H₅OC₂H₅2) C₂H₅Cl3) C₂H₄4) C₂H₅OH

Ans : 4



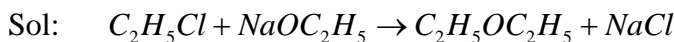
I

16. Chloro ethane reacts with X to form diethyl ether. What is X (2001 E)

1) NaOH

2) H₂SO₄3) C₂H₅ONa4) Na₂S₂O₃

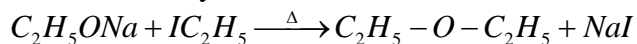
Ans : 3



17. Williamson's synthesis is used for preparing (2001 M)
 1) Alcohols 2) Ketones 3) Ethers 4) Aldehydes

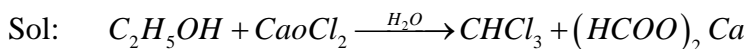
Ans : 3

Sol: Williamson's synthesis



18. Which of the following reacts with ethanol to form chloroform (2000 E)
 1) $SOCl_2$ 2) PCl_3 3) HCl 4) $CaOCl_2 / H_2O$

Ans : 4



19. Which of the following is Lucas reagent (2000 E)
 1) Ammonical silver nitrate 2) Br_2/CCl_4
 3) $ZnCl_2/con\ HCl$ 4) Cold Alkaline $KMnO_4$

Ans : 3

Sol: $ZnCl_2/con\ HCl$ is called Lucas reagent.

20. Which of the following conditions are used for the conversion of ethanol to ethylene (2000 E)

- 1) $Con\ H_2SO_4 / 70^\circ C$ 2) $dil\ H_2SO_4 / 140^\circ C$
 3) $dil\ H_2SO_4 / 100^\circ C$ 4) $Con\ H_2SO_4 / 170^\circ C$

Ans : 4

