CHEMISTRY

BOOKS - UNIVERSAL BOOK DEPOT 1960 CHEMISTRY (HINGLISH)

ALCOHOL, PHENOL AND ETHER

Ordinary thinking (Ojective questions) Introduction of Alcohol, Phenol & Ethers

1. Glycerine has _____

A. One primary and two secondary -OH groups

B. One secondary and two primary -OH groups

C. Three primary -OH groups

D. Three secondary -OH groups

Answer: B

Watch Video Solution

2. Picric acid is

A. Trinitroaniline

B. Trinitrotoluence

C. A volatile liquid

D. 2,4,6-trinitrophenol

Answer: D

Watch Video Solution

3. Carbon percentage is maximum in

A. Pyrene

B. Gammexane

C. Ethylene glycol

D. PVC

Answer: C

Watch Video Solution

4. Carbolic acid is

A. Phenol

B. Phenyl benzoate

C. Phenyl acetate

D. Salol

Answer: A

Watch Video Solution

5. Accodring to Lewis concept of acids and bases, ether is

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: B

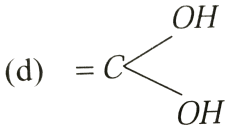
Watch Video Solution

6. General formula of primary alcohol is

A. (a) $>CHOH$

B. (b) $>C-OH$

C. $-CH_2OH$

(d) 

D.

Answer: C

Watch Video Solution

7. Which is primary alcohol

A. Butane-2-ol

B. Butane-1-ol

C. Propane -2-ol

D. Isopropyl alcohol

Answer: B

Watch Video Solution

8. An example of a compound with the functional group $-O-$ is

A. Acetic acid

B. Methyl alcohol

C. Diethyl ether

D. Acetone

Answer: C

Watch Video Solution

9. Butan-2-ol is a :

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. Aldehyde

Answer: B

Watch Video Solution

10. Which of the following is a simple ether ?

A. CH_3OCH_3

B. $C_2H_5OCH_3$

C. $C_6H_5OCH_3$

D. $C_6H_5OC_2H_5$

Answer: A

Watch Video Solution

11. Wood spirit is known as

A. Methanol

B. Ethanol

C. Acetone

D. Benzene

Answer: A

Watch Video Solution

12. Glycerol is a _____.

A. Primary alcohol

B. Monohydric alcohol

C. Secodary alcohol

D. Trihydric alcohol

Answer: D

Watch Video Solution

13. Structure of diethyl ether is confirmed by

A. Kolbe synthesis

B. Frankland synthesis

C. Wurtz synthesis

D. Williamson synthesis

Answer: D

Watch Video Solution

14. Which of the following is tertiary alcohol

A. $\begin{array}{l} CH_2-OH \\ | \\ CH-OH \\ | \\ CH_2-OH \end{array}$

B. $\begin{array}{l} \quad\quad\quad CH_2 \\ \quad\quad\quad | \\ CH_3-CH_2-CH_2OH \\ \quad\quad\quad | \\ \quad\quad\quad CH_2 \\ \quad\quad\quad | \\ \quad\quad\quad CH_3 \end{array}$

C. $CH_3 - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - OH$

D. $CH_3 - CH_2 - OH$

Answer: C

Watch Video Solution

15. Which of the following represents neo-pentyl alcohol

A. $CH_3CH(CH_3)CH_2CH_2OH$

B. $(CH_3)_3C - CH_2OH$

C. $CH_3(CH_2)_3OH$

D. $CH_3CH_2CH(OH)C_2H_5$

Answer: B

View Text Solution

16. Oxygen atom in ether is

A. Very active

B. Replaceable

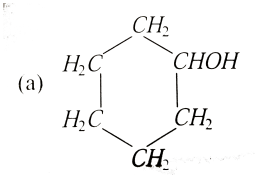
C. Comparatively inert

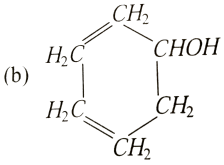
D. Active

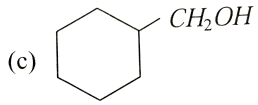
Answer: C

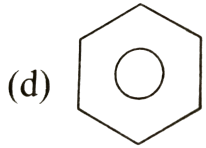
Watch Video Solution

17. The structural formula of cyclohexanol is

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

18. Absolute alcohol is

A. 100% pure alcohol

B. 95% alcohol + 5% H_2O

C. Ethanol + water + phenol

D. 95% ethnol + 5% methanol

Answer: A

Watch Video Solution

19. Fermentation is an

A. Endothermic reaction

B. Exothemic reaction

C. Reversible reaction

D. None of above

Answer: B

Watch Video Solution

20. Carbinol is

A. C_2H_5OH

B. CH_3OH

C. $(CH_3)_2CHOH$

D. $CH_3CH_2CH(OH)CH_3$

Answer: B

Watch Video Solution

21. 3- pentanol

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. None of above

Answer: B

Watch Video Solution

22. Which of the following are known as mercaptans ?

A. Thio-alcohols

B. Thio-ethers

C. Thio-acids

D. Thio-aldehydes

Answer: A

Watch Video Solution

23. Which of the following is dihydric alcohol ?

A. Glycerol

B. Ethylene glycol

C. Catechol

D. Resorcinol

Answer: B

Watch Video Solution

24. In the reaction given below, X is

$C_6H_5MgBr + CH_3OH \rightarrow X$

A. C_6H_6

B. C_6H_5OH

C. $C_6H_5OCH_3$

D. CH_3COOH

Answer: A

Watch Video Solution

25. Acetals are

A. Ketons

B. Diethers

C. Aldehyde

D. hydroxy aldehydes

Answer: B

Watch Video Solution

26. What will be the bond angle C-O-H in alcohol if C and O ATOM POSSESS SP^3 hybridization

A. $109^\circ 28$

B. $111^\circ 42$

C. 109°

D. $108^\circ 30$

Answer: B

Watch Video Solution

27. Cresols are

A. Hydroxy toluenes

B. Dihydric phenols

C. Trihydric phenols

D. Trihydric alcohols

Answer: A

Watch Video Solution

28. Ortho-dihydroxy benzene is :

A. Carvacrol

B. Resorcinol

C. Catechol

D. Orcinol

Answer: C

Watch Video Solution

29. $1, 2, 3 -$ trihydroxybenzene is also known as

A. Phrogallol

B. Phloroglucinol

C. Resorcinol

D. Orcinol

Answer: A

Watch Video Solution

30. Cyclohexanol is a _____ alcohol.

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. Phenol

Answer: B

Watch Video Solution

31. Methylated spirit is

A. Methanol

B. Methanol+ ethanol

C. Methanoic alcohol

D. Methanamide

Answer: B

Watch Video Solution

32. Which of the following do not contain an acyl group

A. Acid chloride

B. Amide

C. Ester

D. Ether

Answer: D

Watch Video Solution

33. In ethers, the $C-O-C$ bond angle is

A. 180°

B. 90°

C. 110°

D. 160°

Answer: C

Watch Video Solution

34. Nitroglycerine is

A. An ester

B. An elcohol

C. A nitro compound

D. An acid

Answer: A

Watch Video Solution

Ordinary thinking (Ojective questions) Preparation of Alcohol, Phenol and Ethers

1. Which enzyme converts glucose and fructose both into ethanol ?

A. Diastase

B. Invertase

C. Zymase

D. Maltase

Answer: C

Watch Video Solution

2. Propene, $CH_3 - CH = CH_2$, can be converted to 1-propanol by oxidation. Which set of reagents among the following is ideal to effect the conversion?

A. Alkaline $KMnO_4$

B. B_2H_6 and alkaline H_2O_2

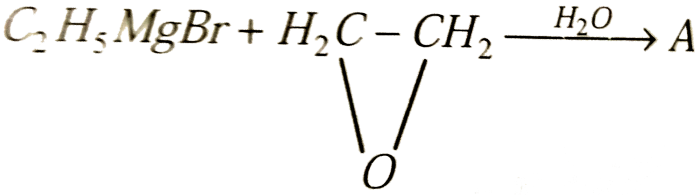
C. $\frac{O_3}{/} Zn$ dust

D. $OsO_4 / CH_4, Cl_2$

Answer: B

Watch Video Solution

3. In the following reaction A is



A. $C_2H_5CH_2CHO$

B. $C_2H_5CH_2CH_2OH$

C. $C_2H_5CH_2OH$

D. C_2H_5CHO

Answer: B

Watch Video Solution

4. Among the following ethers, which one will produce methyl alcohol on treatment with hot concentrated HI

A. $CH_3 - \underset{\underset{CH_3}{|}}{C}\ H - CH_2 - O - CH_3$

B. $CH_3 - CH_2 - CH_2 - CH_2 - O - CH_3$

C. $CH_3 - CH_2 - \underset{\underset{CH_3}{|}}{C}\ H - O - CH_3$

D. $CH_3 - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - O - CH_3$

Answer: D

Watch Video Solution

5. In which case methyl-t-butyl ether is formed

A. $(CH_2H_5)_3CONa + CH_3Cl$

B. $(CH_3)_3CONa + CH_3Cl$

C. $(CH_3)_3CONa + C_2H_5Cl$

D. $(C_2H_5)_3CONa + C_2H_5Cl$

Answer: B

Watch Video Solution

6. Benzene diazonium chloride on boiling with dilute sulphuric acid, gives

A. Toluene

B. Benzoic acid

C. Benzene

D. Phenol

Answer: D

Watch Video Solution

7. Maltose on hydrolysis gives

A. Mannose +glucose

B. Galactose + glucose

C. Glucose

D. Mannose + fructose

Answer: C

Watch Video Solution

8. C_2H_5MgI reacts with HCHO to form last product :

A. CH_3CHO

B. C_3H_7OH

C. CH_3COCH_3

D. CH_3COOCH_3

Answer: B

Watch Video Solution

9. Which of the following is industrially prepared by passing ethylene into hypochlorous acid?

A. Ethylene glycol

B. Ethylene oxide

C. Ethylene dinitrate

D. Grignard synthesis

Answer: A

Watch Video Solution

10. The reaction given below is known as

$C_2H_5ONa + IC_2H_5 \rightarrow C_2H_5OC_2H_5 +$ NaI

A. Kolbe synthesis

B. Wurtz synthesis

C. Williamson synthesis

D. Grignard synthesis

Answer: C

View Text Solution

11. Benzyl alcohol is obtained from benzaldehyde by

A. Fittig reaction

B. Cannizaro reaction

C. Kolbe reaction

D. Wurtz reaction

Answer: B

Watch Video Solution

12. Ethyl alcohol is industrially prepared from ethylene by:

A. Permanganate oxidation

B. Catalytic reduction

C. Absorbing in H_2SO_4 followed by hydrolysis

D. Fermentation

Answer: C

Watch Video Solution

13. $A \xrightarrow[dil.\,H_2SO_4]{K_2Cr_2O_7} B \xrightarrow[H_2O]{CH_3MgI} CH_3 - \overset{\overset{CH_3}{|}}{\underset{\underset{OH}{|}}{C}} - CH_3$

The reactant A is :

A. $CH_3CHOHCH_3$

B. CH_3COCH_3

C. C_2H_5OH

D. CH_3COOH

Answer: A

Watch Video Solution

14. Fats on alkaline hydrolysis, give

A. Glycol

B. Alcohol

C. Glycerol

D. Ethylene oxide

Answer: C

Watch Video Solution

15. In the reaction

$C_6H_5CHO + (CH_3CO)_2O \xrightarrow{CH_3COONa} A$. Product A is

A. Acetaldehyde

B. Cinnamic acid

C. β-naphthol

D. Phenol

Answer: B

Watch Video Solution

16. When an alkyl halide is allowed to react with a sodium alkoxide the product most likely is

A. An aldehyde

B. A ketone

C. An ether

D. A carboxylic acid

Answer: C

Watch Video Solution

17. Which is the product of the following reactions

$$C_6H_5 - \overset{\overset{O}{||}}{C} - OCH_3 \xrightarrow[2.H^+/H_2O]{1.C_2H_5MgBr\,(2\text{mole})}$$

A. $C_6H_5 - CH_2 - OH$

B. $C_6H_5 - \underset{\underset{C_2H_5}{|}}{\underset{|}{C}H} - C_2H_5$ (OH)

C. $C_6H_5 - \underset{\underset{OH}{|}}{\underset{|}{C}} - C_2H_5$ (C_2H_5)

D. $C_6H_5 - \overset{\overset{O}{|}}{C} - OC_2H_5$

Answer: C

Watch Video Solution

18. Which of these methods can be used to prepare alcohols

(I) Hydrolysis of cyanides

(II) Hydration of olefines

(III) Reduction of carbonyl compounds

A. I, II , and III

B. I and II

C. II and III

D. I and III

Answer: C

Watch Video Solution

19. The compound formed when ethyl bromide is heated with dry silver oxide is

A. Dimethyl ether

B. Diethyl ether

C. Methyl alcohol

D. Ethyl alcohol

Answer: B

Watch Video Solution

20. Formaldehyde gives an additive product with Methylmagnesium iodide which in aqueous hydrolysis gives

A. Isopropyl alcohol

B. Ethyl alcohol

C. Methyl alcohol

D. Propyl alcohol

Answer: B

Watch Video Solution

21. The reaction of , water gas $(CO + H_2) + H_2$ at 673 K, 300 atmosphere in presence of the catalyst Cr_3O_3 / ZnO is used for the manufacture of

A. HCHO

B. HCOOH

C. CH_3OH

D. CH_3COOH

Answer: C

Watch Video Solution

22. Ethanol is prepaid industrialy by

A. Hydration of ehylene

B. Fermentation of sugars

C. Both the above

D. None of above

Answer: C

Watch Video Solution

23. $LiAlH_4$ converts acetic acid into-

A. Acetaldehyde

B. Methane

C. Ethyl alcohol

D. Methyl alcohol

Answer: C

Watch Video Solution

24. In the reaction $Ar - OH + RX \xrightarrow{\text{Alkali}} A$. A is :

A. An aldehyde

B. An aryl chloride

C. An ether

D. ketone

Answer: C

Watch Video Solution

25. The fermentation of starch to give alcohol occurs mainly with the help of :

A. O_2

B. Air

C. CO_2

D. E

Answer: A

Watch Video Solution

26. $CH_2 = CH_2 + B_2H_6 \xrightarrow[H_2SO_4]{NaOH}$ Pr oduct. Product is :

A. CH_3CH_2CHO

B. CH_3CH_2OH

C. CH_3CHO

D. None of above

Answer: B

Watch Video Solution

27. Acetyl bromide reacts with excess of CH_3MGI followed by treatement with a saturated solution of NH_4C1 gives:

A. 2-methyl-2-propanol

B. Acetamide

C. Acetone

D. Acetyl iodide

Answer: A

Watch Video Solution

28. Acid catalyzed hydration of alkenes except ethene leads to the formation of

A. Primary alcohol

B. Secondary and tertiary alcohol

C. Mixture of primary and secondary alcohols

D. Mixture of secondary and tertiary alcohols

Answer: B

Watch Video Solution

29. Methylphenyl`ether can be obtained by reacting

A. Phenolate ions and methyl iodide

B. Methoxide ions and bromobenzene

C. Methonal and phenol

D. Bromo benzene and methyl bromide

Answer: A

Watch Video Solution

30. When ethanal reacts with CH_3MgBr and $C_2H_5OH/dryHCl$, the products formed are _____.

A. Ethyl alcohol and 2-propanol

B. Ethane and hemi-acetal

C. 2-propanol and acetal

D. Propane and methyl acetate

Answer: C

Watch Video Solution

31. $C_6H_5 - CH = CHCHO \xrightarrow{(X)} C_6H_5CH = CH_2OH$

In the above sequence (X) can be:

A. H_2/Ni

B. $NaBH_4$

C. $K_2Cr_2O_7 / H^+$

D. Both (a) and (b)

Answer: B

Watch Video Solution

32. Absolute alcohol can be obtained from rectified spirit

A. By removing the water in using concentrated sulphuric acid

B. By removing the water using phosphorus pentoxide

C. By distilling with the appropriatye amount of benzene

D. By distiling over plenty of quick lime

Answer: B

Watch Video Solution

33. Which is formed when benzylamine react with nitrous acid ?

A. C_6H_5OH

B. C_6H_5ON

C. $C_2H_5N_2OH$

D. $C_6H_5CH_2OH$

Answer: C

Watch Video Solution

34. Which of the following combination can be used to synthesise ethanol?

A. CH_3Mgl and CH_3COCH_3

B. CH_3Mgl and C_2H_5OH

C. CH_3Mgl and $CH_3COOC_2H_5$

D. CH_3Mgl and $HCOOC_2H_5$

Answer: C

Watch Video Solution

35. Acetone on treatment with $CH_3 - Mg - I$ and on further hydrolysis gives

A. Isopropyl alcohol

B. Primary alcohol

C. Acetic acid

D. 2-Methyl 2-propanol

Answer: D

Watch Video Solution

36. The reaction between an ester and excess of Grignard reagent shall finally result in a

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. Ketone

Answer: C

Watch Video Solution

37. When 2-ethylanthraquinol dissolved in a mixture of benzene and cyclohexanol is oxidised , the product is

A. Ethanol

B. Hydrogen peroxide

C. Anthracene

D. None of above

Answer: A

View Text Solution

38. Formation of di ethyl ether form ethanol is based on a

A. Dehydration reaction

B. Dehydrogenation reaction

C. Hydrogenation reaction

D. Heterolytic fission reaction

Answer: A

Watch Video Solution

39. An oranic compound dissolved in dry benzene evolved hydorgen on treatment will sodium. It is

A. A ketone

B. An aldehyde

C. A tertiary amine

D. An alcohol

Answer: D

Watch Video Solution

40. In the commercial manufacture of ethyl alcohol from starchy substances by fermentation method, which enzymes stepwise complete

the fermentation reaction.

A. Diastase, maltase , and zymase

B. Maltase, zymase and invertase

C. Diastase, zymase and lactase

D. Diastase , invertase and zymase

Answer: A

Watch Video Solution

41. The reagent used for the preparation of higher ether from halogenated ethers is

A. Conc. H_2SO_4

B. Sodium alkoxide

C. Dry silver oxide

D. Grignard reagent

Answer: D

Watch Video Solution

42. Acetic acid and CH_3OH are obtained on large scale by destructive distillation of

A. Wood

B. coal

C. Turpentine

D. Crude oil

Answer: A

Watch Video Solution

43. Action of water in the presence of sulphuric acid with the following alkenes

(i) $CH_3 - CH = C \begin{matrix} CH_3 \\ CH_3 \end{matrix}$ and (ii) $CH_3 - CH = CH_2$ gives

A. (a) (i) $CH_3 - CH_2 - C(OH) \begin{matrix} CH_3 \\ CH_3 \end{matrix}$ and (ii) $CH_3 - CH(OH) - CH_3$

B. (b) (i) $CH_3 - C(OH) = C \begin{matrix} CH_3 \\ CH_3 \end{matrix}$ and (ii) $CH_3 - CH_2 - CH_2OH$

C. (c) (i) $CH_3 - CH(OH) - CH \begin{matrix} CH_3 \\ CH_3 \end{matrix}$ and (ii) $CH_3 - CH(OH) - CH_3$

D. (d) (i) $CH_3 - CH_2 - C(OH) \begin{matrix} CH_3 \\ CH_3 \end{matrix}$ and (ii) $CH_3 - CH_2 - CH_2OH$

Answer: A

View Text Solution

44. The heating of phenyl-methyl ethers with HI produces _____.

A. Iodobenzene

B. Phenol

C. Benzene

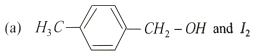
D. Ethyl chlorides

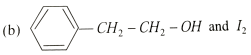
Answer: B

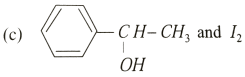
Watch Video Solution

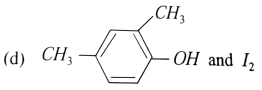
45. Compound $A, C_8H_{10}O$, is found to react with $NaOI$ (produced by reacting Y with $NaOH$) and yields a yellow precipitate with characteristic smell.

A and Y are respectively

A. (a)  and I_2

B. (b)  and I_2

C. (c)  and I_2

D. (d)  and I_2

Answer: C

Watch Video Solution

46. The compound A on treatment with Na gives B, and with PCl_5 gives C. B and C react together to give diethyl ether. A, B and C are in the order:

A. $C_2H_5OH, C_2H_6, C_2H_5Cl$

B. $C_2H_5OH, C_2H_5Cl, C_2H_5ONa$

C. $C_2H_5Cl, C_2H_6, C_2H_5OH$

D. $C_2H_5OH, C_2H_5ONa, C_2H_5Cl$

Answer: D

Watch Video Solution

Ordinary thinking (Ojective questions) Properties of Alcohol , Phenol and Ethers

1. When phenol is heated with phthalic anhydride in concentrated sulphuric acid and the hot reaction mixture is poured into a dilute solution of sodium hydroxide , the product formed is

A. Alizarin

B. Methyl orange

C. Fluorescein

D. Phenolphthalein

Answer: D

Watch Video Solution

2. When ethyl alcohol (C_2H_5OH) is mixed with ammonia and passed over heated alumina, the compound formed is

A. $C_2H_5NH_2$

B. C_2H_4

C. $C_2H_5OC_2H_5$

D. CH_3OCH_3

Answer: A

Watch Video Solution

3. Lucas test is used for

A. Alcohols

B. Amines

C. Diethyl ether

D. Glacial acetic acid

Answer: A

Watch Video Solution

4. An organic amine (X) was treated with alcoholic potast and another compound (Y), a foul smelling gas ws formed with formula C_6H_5NC, (Y) was formed by reacting a compound (Z) with Cl_2 in the presence of slaked lime. The compound (Z) is:

A. $C_6H_5NH_2$

B. C_2H_5OH

C. Ch_3OCH_3

D. $CHCl_3$

Answer: B

Watch Video Solution

5. Methanol and ethanol are miscible in water due to

A. Covalent character

B. Hydrogen bonding character

C. Oxygen bonding character

D. None of these

Answer: B

Watch Video Solution

6. Glycerol reacts with $P_4 + I_2$ to form:

A. Aldehyde

B. Allyl iodide

C. Allyl alcohol

D. Acetylene

Answer: B

Watch Video Solution

7. Kolbe-schmidt reaction is used for

A. Salicylic acid

B. Salicylaldehyde

C. Phenol

D. Hydrocarbon

Answer: A

Watch Video Solution

8. On heating glycerol with conc. H_2SO_4 a compound is obtained which has a bad odour. The compound is :

A. Glycerol sulphate

B. Acrolein

C. Formic acid

D. Allyl alcohol

Answer: B

Watch Video Solution

9. Diazo coupling is useful to prepare some

A. Pesticides

B. proteins

C. Dyes

D. vitamins

Answer: C

Watch Video Solution

10. The compound which does not react with sodium is

A. C_2H_5OH

B. $CH_3 - O - CH_3$

C. CH_3COOH

D. $CH_3 - CHOH0 - CH_3$

Answer: B

Watch Video Solution

11. The increasing order of acidity among phenol, p-methylphenol, m-nitrophenol and p-nitrophenol is:

A. m-nitrophenol,p-nitrophenol, Phenol, p-methylpenol

B. p-methylphenol,m-nitrophenol, phenol,p-nitrophenol

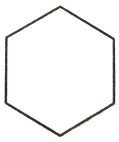
C. p-methylphenol, phenol, m-nitrophenol,p-nitrophenol

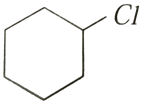
D. Phenol, p-methylphenol, p-nitrophenol, m-nitrophenol

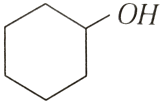
Answer: C

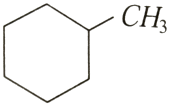
Watch Video Solution

12. Which of the following compound will be most easily attacked by an electrophile

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: C

Watch Video Solution

13. Which of the following reagents convert the propene to 1-propanol?

A. H_2O, H_2SO_4

B. Aqueous KOH

C. $MgSO_4$, $NaBH_4$ / H_2O

D. B_2H_6, H_2O_2, OH^-

Answer: D

Watch Video Solution

14. Which of the following is acidic

A. CH_3OH

B. C_6H_5OH

C. $(CH_3)_2CHOH$

D. CH_3CH_2OH

Answer: B

Watch Video Solution

15. Compound A reacts with PCl_5 to give B which on treatment with KCN followed by hydrolysis gave propionic acid. What is A and B respectively?

A. C_3H_8 and C_3H_7Cl

B. C_2H_6 and C_2H_5Cl

C. C_2H, Cl and C_2H_5Cl

D. C_2H_5OH and C_2H_5Cl

Answer: D

Watch Video Solution

16. Ethylene oxide when treated with Grignared reagent yeild

A. Cyclopropyl alcohol

B. Primary alcohol

C. Secondary alcohol

D. Tertiary alcohol

Answer: B

Watch Video Solution

17. In the reaction

$$CH_3\overset{CH_3}{\underset{|}{C}}H - CH_2 - O - CH_2CH_3 + HI \xrightarrow{Heated}$$

Which of the following compounds will be formed?

A. $CH_3 - \overset{CH_3}{\underset{|}{C}}H - CH_2 - I + CH_3CH_2OH$

B. $CH_3 - \underset{CH_3}{\overset{|}{C}}H - CH_3 + CH_3CH_2OH$

C. $CH_3 - \underset{CH_3}{\overset{|}{C}}H - CH_2OH + CH_3CH_3$

D. $CH_3 - \underset{CH_3}{\overset{|}{C}}H - CH_2OH + CH_3 - CH_2 - I$

Answer: D

Watch Video Solution

18. Consider the following reaction :s

Phenol $\xrightarrow[Zn\text{dust}]{} X \xrightarrow[\text{Anhydrous}\,AlCl_3]{Ch_3Cl} Y \xrightarrow{\text{Alkaline}\ \ KMnO_4} Z.$

The product Z is

A. Toluene

B. Benzaldehyde

C. benzoic acid

D. Benzene

Answer: C

Watch Video Solution

19. Consider the following reaction

ethanol $\xrightarrow{PBr_3} X \xrightarrow{alc.KOH} Y \xrightarrow[(ii)\,H_2O,heat]{(i)\,H_2SO_4,\text{room temp.}} Z$ the product Z is

A. $CH_2 = CH_2$

B. $CH_3CH_2 - O - CH_2 - CH_3$

C. $CH_3 - CH_2 - O - SO_3H$

D. CH_3CH_2OH

Answer: D

Watch Video Solution

20. Consider the following reaction :s

ethanol $C_2H_5OH \xrightarrow{PBr_3} X \xrightarrow{alc.KOH} Y \xrightarrow[(ii)\,H_2O,heat]{(i)\,O_3Zn} Z$ the product Z is

A. $2CO_2$

B. $2HCOOH$

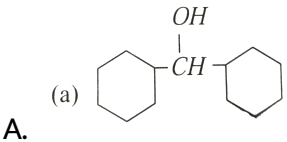
C. $\begin{matrix} C & HO \\ | & \\ CHO & \end{matrix}$

D. (d) $2\ \begin{matrix} H \\ H \end{matrix}\!\!>C=O$

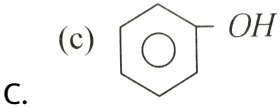
Answer: D

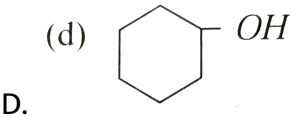
View Text Solution

21. Which one of the following compounds has the most acidic nature?

A. 

B. 

C. 

D. 

Answer: C

Watch Video Solution

22. Given are cyclohexanol (I), acetic acid (II), $2, 4, 6 -$ trinitrophenol (III) and phenol (IV). In these the order of decreasing acidic character will be:

A. $III > IV > II > I$

B. $III > II > IV > I$

C. $II > III > I > IV$

D. $II > III > IV > I$

Answer: B

Watch Video Solution

23. Following compounds are given

1.CH_3CH_2OH

2. CH_3COCH_3

3.$CH_3 - \underset{\underset{CH_3}{|}}{C}\ HOH$

4.CH_3OH

Which of the above compound (s) on,being warmed with iodine solution and NaOH, will give iodoform

A. 1,3 and 4

B. only2

C. 1, 2 and 3

D. 1 and 2

Answer: C

Watch Video Solution

24. Which of the following will not be soluble in sodium hydrogen carbonate?

A. o-Nitrophenol

B. Benzenesulphonic acid

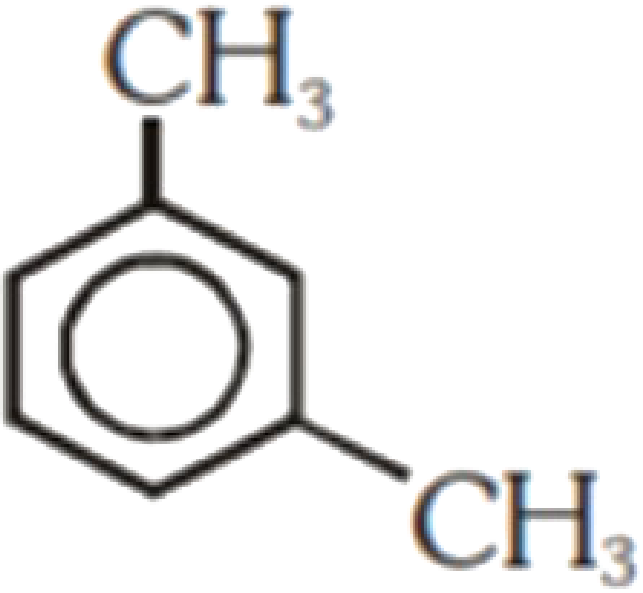
C. 2,4,6-trinitrophenol

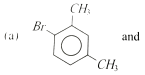
D. Benzoic acid

Answer: A

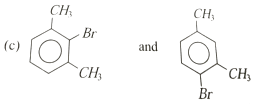
Watch Video Solution

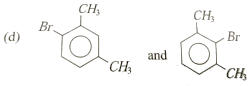
25. What products are formed when the following compounds is treated with Br_2 in the presence of $FeBr_3$?



A. (a)  and 

B. (b)  and 

C. 

D. 

Answer: A

Watch Video Solution

26. Among the following sets of reactants which one produces anisole?

A. C_6H_5OH, neutral $FeCl_3$

B. $C_6H_5 - CH_3, CH_3COCl, AlCl_3$

C. $CH_3CHO, RMgX$

D. $C_6H_5OH, NaOH, CH_3I$

Answer: D

Watch Video Solution

27. Which of the following is not characteristic of alcohols?

A. they are lighter than water

B. Their boiling points rise fairly uniformly with increasing molecular weight

C. Lower members are insoluble in water and organic solvents but solubility regularly increasing with molecular weight

D. Lower members have pleasant smell and burning taste, while higher members are odourless and tasteless.

Answer: C

Watch Video Solution

28. On boiling with concentrated hydrobromic acid, pheny1 Ethyl ether will yield

A. Phenol and ethyl bromide

B. Phenol and ethane

C. Bromobenzene and ethanol

D. Bromobenzene and ethane

Answer: A

Watch Video Solution

29. In presence of NaOH, phenol react with $CHCl_3$ to form o-hydroxy benzaldehyde.This reaction is called

A. Riemer-Tiemann reaction

B. Sandmeyer reaction

C. Hoffmann degradation reaction

D. Gattermann aldehyde synthesis

Answer: A

Watch Video Solution

30. Phenol is treated with bromine water and shaken well. The white precipitate formed during the process is

A. m-bromophenol

B. 2,4-dibromophenol

C. 2,4,6-tribromophenol

D. A mixture of 0- and p-bromophenols

Answer: C

Watch Video Solution

31. Which of the following product is formed , when ether is exposed to air :

A. Oxide

B. Alkanes

C. Alkenes

D. Peroxide of diethyl ether

Answer: D

Watch Video Solution

32. At higher temperature, iodoform reaction is given by:

A. $CH_3CO_2CH_3$

B. $CH_3CO_2C_2H_5$

C. $C_6H_5CO_2CH_3$

D. $CH_3CO_2C_6H_5$

Answer: D

Watch Video Solution

33. What is the product obtained when chloride reacts with ethyl alcohol in the presence of NaOH ?

A. CH_3Cl

B. C_2H_5Cl

C. CCl_3CHO

D. $CHCl_3$

Answer: D

Watch Video Solution

34. An organic compound 'X' on treatment with pyridinium chlorochromate in dichloromethane gives compound 'Y'. Compoun 'Y', reacts with I_2 and alkali to form tri-iodomethane. The compound 'X' is :

A. C_2H_5OH

B. CH_3CHO

C. CH_3COCH_3

D. CH_3COOH

Answer: A

Watch Video Solution

35. Isopropylbenzene on air oxidation in the presence of dilute acid gives

A. C_6H_5COOH

B. $C_6H_5COCH_3$

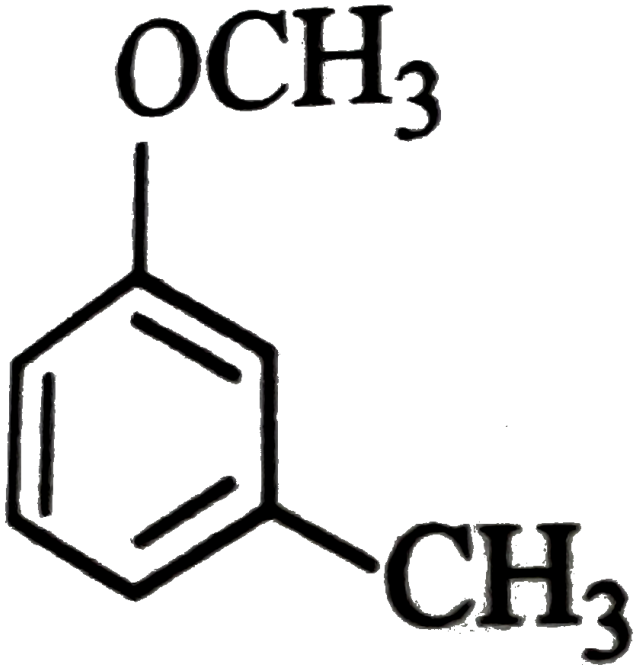
C. C_6H_5CHO

D. C_6H_5OH

Answer: D

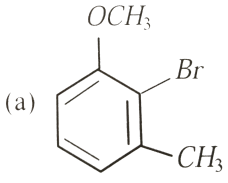
Watch Video Solution

36. The major product obtained on monobromination (with $Br_2 / FeBr_3$) of the following compound A is

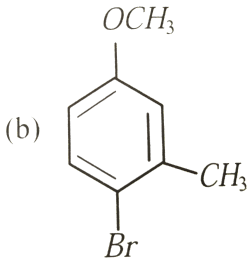


A

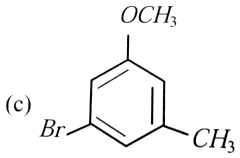
A.



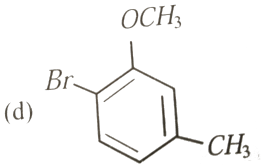
B.



C.



D.



Answer: B

Watch Video Solution

37. When of the following can work as a dehydrating agent for alcohols

A. H_2SO_4

B. Al_2O_3

C. H_3PO_4

D. All of these

Answer: D

Watch Video Solution

38. $C_6H_5OH + ClCOCH_3 \xrightarrow{\text{Aq. NaOH}} C_6H_5COOCH_3$ is an example of

A. Dow reaction

B. Reimer-Tiemann reaction

C. Schotten-Baumann reaction

D. Kolbe reaction

Answer: C

Watch Video Solution

39. In reaction of alcohols with alkali metal, acid etc. which of the following alcohol will react fastest

A. Secondary

B. Tertiary

C. primary

D. All equal

Answer: C

Watch Video Solution

40. Dehydration of ethanol gives

A. Acetic acid

B. Ethane

C. Ethylene

D. Acetylene

Answer: C

Watch Video Solution

41. The reaction of conc. HNO_3 and phenol forms

A. Benzoic acid

B. Salicylic acid

C. o-and p-nitrophenol

D. Picric acid

Answer: D

Watch Video Solution

42. With oxalic acid, glycerol at 260° C gives

A. Allyl alcohol

B. Glyceryl mono-oxalate

C. Formic acid

D. Glyceraldehyde

Answer: A

Watch Video Solution

43. Which of the following statement is correct

A. Phenol is less acidic than ethyl alcohol

B. Phenol is more acidic than ethyl alcohol

C. Phenol is more acidic than carboxylic acid

D. Phenol is more acidic than carbonic acid

Answer: B

Watch Video Solution

44. In the Liebermann's nitroso reaction, sequential changes in the colour of phenol occurs as

A. Brown or red $\rightarrow$ green $\rightarrow$ red $\rightarrow$ deep blue

B. Red $\rightarrow$ deep blue $\rightarrow$ green

C. Red $\rightarrow$ deep blue $\rightarrow$ green

D. White $\rightarrow$ red $\rightarrow$ green

Answer: A

Watch Video Solution

45. Methyl alcohol cab be distinguished from Ethyl alcohol using

A. Fehling solution

B. Schiff's reagent

C. Sodium hydroxide and iodine

D. Phthalein fusion test

Answer: C

Watch Video Solution

46. An unknown compound 'D', first oxidised to aldehyde and then acetic acid by a dilute solution of $K_2Cr_2O_7$ and H_2SO_4 . The unknown compound 'D' is

A. CH_3CHO

B. CH_2CH_3OH

C. CH_3CH_2OH

D. $CH_3CH_2CH_3$

Answer: C

Watch Video Solution

47. Phenol and benzoic acid is distinguished by

A. NaOH

B. $NaHCO_3$

C. Na_2CO_3

D. H_2SO_4

Answer: B

Watch Video Solution

48. When glycerol is heated with $KHSO_4$ it gives

A. $CH_2 = CH - CH_3$

B. $CH_2 = CH - CH_2OH$

C. $CH_2 = CH - CHO$

D. $CH_2 = C = CH_2$

Answer: C

Watch Video Solution

49. The major product formed in the following reaction is

$CH_3CH(Cl)CH_2 - CH_2OH \xrightarrow{aq.KOH}$

A. $CH_3CH = CH - CH_2OH$

B. $CH_2 = CH - CH_2 - CH_2OH$

C. $CH_3 - \underset{\underset{O}{|}}{CH} - \underset{\underset{CH_2}{|}}{C}\ H_2$

D. $CH_3 - \underset{\underset{OH}{|}}{C}\ H - CH_2 - CH_2OH$

Answer: D

Watch Video Solution

50. Diethyl ether can be decomposed by heating with :

A. HI

B. NaOH

C. Water

D. $KMnO_4$

Answer: A

Watch Video Solution

51. Isopropyl alcohol on oxidation forms :

A. Acetone

B. Ether

C. Ethylene

D. Acetaldehyde

Answer: A

Watch Video Solution

52. Primary and secondary alcohols on action of reduced copper give

A. Aldehydes and Ketones respectively

B. Ketones and aldehydes respectively

C. Only aldehydes

D. Only ketones

Answer: A

Watch Video Solution

53. If there be a compound of the formula $CH_3C(OH)$ which one of the following compound would be obtained from it without reaction with any reagent

A. CH_3OH

B. C_2H_5OH

C. CH_3COOH

D. $HCHO$

Answer: C

Watch Video Solution

54. Glycerol reacts with Conc. HNO_3 and Conc. H_2SO_4 to form

A. Glycerol mononitrate

B. Glycerol dinitrate

C. Glycerol trinitrate

D. Acrolein

Answer: C

Watch Video Solution

55. When vapour of ethanol are passed over platinised asbestos in excess of air, the compound formed is

A. CH_3CHO

B. CH_3COCH_3

C. C_2H_2

D. CH_3COOH

Answer: A

Watch Video Solution

56. When vapour of an alcohol are passed over hot reduced copper, alcohol is converted into alkene quickly , the alcohol is

A. Primary

B. Secondary

C. Tertiary

D. None of these

Answer: C

Watch Video Solution

57. The process of manufacture of absolute alcohol from rectified spirit is

A. Fractional distillation

B. Steam distillation

C. Aeotropic distillation

D. Vacuum distillation

Answer: C

Watch Video Solution

58. Final product formed on reduction of glycerol by huydroiodic acid is

A. Propane

B. Propanoic acid

C. propene

D. propyne

Answer: C

Watch Video Solution

59. The reaction between an alcohol and an acid with the elimination of water molecule is called

A. Esterfication

B. Saponification

C. Etherification

D. Elimination

Answer: A

Watch Video Solution

60. When ethyl alcohol reacts with acetic acid, the products formed are

A. Sodium ethoxide + hydrogen

B. Ethyl acetate + water

C. Ethyl acetate + soap

D. Ethyl alcohol + water

Answer: B

Watch Video Solution

61. Alcohols of low molecular weight are

A. Soluble in water

B. Soluble in all solvents

C. Insoluble in all solvents

D. Soluble in water on heating

Answer: B

Watch Video Solution

62. The compound which will give negative iodoform test is

A. CH_3CHO

B. CH_3CH_2OH

C. Isopropyl alcohol

D. Benzyl alcohol

Answer: A

Watch Video Solution

63. When ether is exposed to air for some time, an explosive substance produced is :

A. peroxide

B. TNT

C. Oxide

D. Superoxide

Answer: D

Watch Video Solution

64. In which of the following reaction, phenol or sodium phenoxide is not formed

A. $C_6H_5N_2Cl +$ alco. $KOH \rightarrow$

B. $C_6H_5Ocl + NaOH \rightarrow$

C. $C_6H_5N_2Cl +$ aq. $NaOH \rightarrow$

D. $C_6H_5NNCl \xrightarrow[\Delta]{H_2O}$

Answer: B

Watch Video Solution

65. Phenol on distillation with zinc dust gives _____.

A. C_6H_6

B. C_6H_{12}

C. $C_6H_5OC_6H_5$

D. $C_6H_5 - C_6H_5$

Answer: B

Watch Video Solution

66. The boiling point of glycerol is more than propanol because of

A. Hydrogen bonding

B. Hybridisation

C. Resonance

D. All the above

Answer: B

Watch Video Solution

67. Which of the following is not true in case of reaction with heated copper at $300^{\circ} C$?

A. Phenol $\rightarrow$ Benzyl alcohol

B. Primary alcohol $\rightarrow$ Aldehyde

C. Secondary alcohol $\rightarrow$ Ketone

D. Tertiary alcohol $\rightarrow$ Olefin

Answer: A

Watch Video Solution

68. Which is the most suitable method for removing the traces of water from ethanol ?

A. Heating with Na metal

B. Passig dry HCl through it

C. Distilling it

D. Reacting with Mg

Answer: B

Watch Video Solution

69. Cresol has :

A. Alcoholic -OH

B. Phenolic -OH

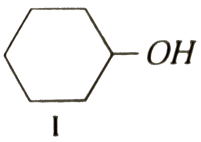
C. $-COOH$

D. $-CHO$

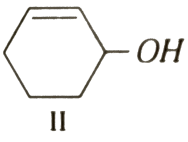
Answer: C

Watch Video Solution

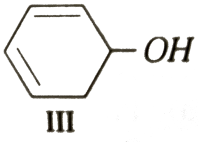
70. The correct order of ease of dehydration of following is



I



II



III

A. $I > II > III$

B. $III > II > I$

C. $I > III > II$

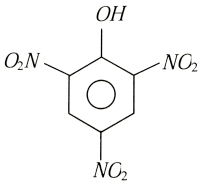
D. $III > I > II$

Answer: C

Watch Video Solution

71. Which of the following will not react with $NaOH$?

A. (a)



B. C_2H_5OH

C. CH_3CONH_2

D. $CH(CN)_3$

Answer: B

Watch Video Solution

72. When phenol reacts with ammonia is presence of $ZnCl_2$ at 300° C, it gives

A. Primary amine

B. Secondary amine

C. Tertiary amine

D. Both (b) and (c)

Answer: A

Watch Video Solution

73. Which of the following is not characteristic of alcohols?

A. Lower alcohols are stronger and have bitter taste

B. Higher alcohols are stronger and have bitter taste

C. The boiling points of alcohols increase with increasing molecular mass

D. The lower alcohols are soluble in water

Answer: B

Watch Video Solution

74. Which statement is not correct about alcohol

A. Alcohol is lighter than water

B. Alcohol evaporates quickly

C. Alcohol of less no. of carbon atoms is less soluble in water than alcohol of high no. of carbon atoms

D. All of these

Answer: B

Watch Video Solution

75. When primary alcohol is oxidised with chlorine, it produces

A. $HCHO$

B. CH_3CHO

C. CCl_3CHO

D. C_3H_7CHO

Answer: D

Watch Video Solution

76. Conc. H_2SO_4 heated with excess of C_2H_5OH at 140° C to form

A. $CH_3CH_2 - O - CH_3$

B. $CH_3CH_2 - O - CH_2CH_3$

C. $CH_3 - O - CH_2 - CH_2 - CH_3$

D. $CH_2 = CH_2$

Answer: D

View Text Solution

77. Which of the following react with benzoic acid to form enthy1 benzoate?

A. Ethyl alcohol

B. Cinnamic acid

C. Sodium ethoxide

D. Ethyl chloride

Answer: B

Watch Video Solution

78. Which of the following is used as catalyst for preparing Grignard reagent

A. Iron powder

B. Dry ether

C. Activated charcoal

D. MnO_2

Answer: B

Watch Video Solution

79. Pcl_5 reacts with a compound containing

A. $-SO_3$ group

B. $-OH$ group

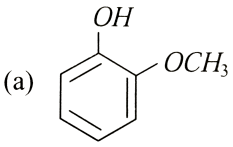
C. NO_3 group

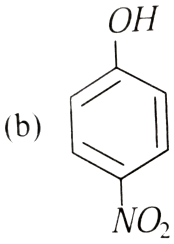
D. $-NO$ group

Answer: B

Watch Video Solution

80. Phenol is more acidic than

A. 

B. 

C. C_2H_2

D. Both (a) and (c)

Answer: D

Watch Video Solution

81. Dehydration of 2-butanol yield

A. 1-butene

B. 2-butene

C. 2-butyne

D. Both (a) and (b)

Answer: D

Watch Video Solution

82. The boiling point of methanol is greater than that of Methyl thiol because

A. There is intramolecular hydrogen bonding in methanol and intermoleculare hydrogen bonding in methyl thiol

B. There is intermolecular hydrogen bonding in methanol and no hydrogen bonding in methyl thiol

C. There is no hydrogen bonding in methanol and intermolecules hydrogen bonding in methyl thiol

D. There is intramolecules hydrogen and no hydrogen bonding in methyl thiol

Answer: B

Watch Video Solution

83. Phenol can be distinguished from ethanol by the following reagents except

A. Sodium

B. $NaOH / I_2$

C. Neutral $FeCl_3$

D. Br_2 / H_2O

Answer: A

Watch Video Solution

84. In the Victor Meyer's test, the colours given by 1°, 2° and 3° alcohols are respectively :

A. Red, colourless , blue

B. Red, blue , colourless

C. Red, blue,colourless

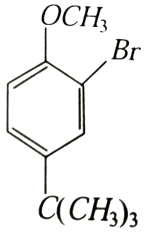
D. Red, blue, violet

Answer: B

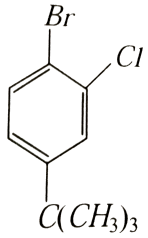
Watch Video Solution

85. Anisol $\xrightarrow[AlCl_3]{(CH_3)_3CCl} \xrightarrow{Cl_2/FeCl_3} \xrightarrow[heat]{HBr} X$

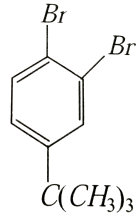
The product X in the above series of reacitons is

A. (a) 

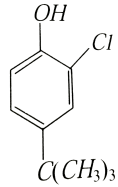
B. (b)



C. (c)



D. (d)



Answer: D

Watch Video Solution

86. An organic compound 'X' with molecular formula C_7H_8O in insoluble in aqueous $NaHCO_3$ but dissolved in NaOH. When treated with bromine water 'X' rapidly give 'Y' (C_7H_5OBr). The compound 'X' and 'Y' respectively are

A. Benzyl alcohol and 2,4,6-tribromo-3-methoxy benzene

B. Benzyl alcohol and 2,4,6-tribromo-3-methyl phenol

C. o-cresol and 3,4,6-tribromo-2-methyl phenol

D. m-cresol and 2,4,6-tribromo-3-methyl phenol

Watch Video Solution

87. The products obtained when benzyl phenyl ether is heated with HI in the mole ratio 1 : 1 are

1. Phenol

2. Benzyl alcohol

3. Benzyl iodide

4. Iodobenzene

A. 1 and 3 only

B. 3 and 4 only

C. 1 and 4 only

D. 2 and 4 only

Answer: A

Watch Video Solution

88. The compound which undergoes dehydration very easily is :

A. 2-methylpropan-2-ol

B. Ethyl alcohol

C. 3-methyl-2-butanol

D. Propyl alcohol

Answer: A

Watch Video Solution

89. Which of the following alcohols gives the best yield of dialkyl ether on being heated with a trace of sulphuric acid ?

A. 2-pentanol

B. Cyclopentanol

C. 2-methyl-2-butanol

D. 1-pentanol

Watch Video Solution

90. The hydroxyl compound that gives a precipitate immediately when treated with concentrated HCl and anhydrous $ZnCl_2$ is :

A. 3-methyl-2-butanol

B. 3-methyl-1-butanol

C. 1-butanol

D. 2-methyl-2-butanol

Answer: D

Watch Video Solution

91. Diethyl ether absorbs oxygen to form-

A. Red coloured sweet smelling compound

B. Acetic acid

C. Ether suboxide

D. Ether peroxide

Answer: D

Watch Video Solution

92. Alcohols react with Grignard reagent to form

A. Alkanes

B. Alkenes

C. Alkynes

D. All of these

Answer: A

Watch Video Solution

93. A compound 'A' on oxidation gave acetaldehyde , then again on oxidation gave acid . After first oxidation it was reacted with ammoniacal $AgNO_3$ then silver mirror was produced. A is likely to be

A. Primary alcohol

B. Tertiary alcohol

C. Acetaldehyde

D. Acetone

Answer: A

Watch Video Solution

94. In esterification , the reactivity of alcohols is

A. $1^\circ > 2^\circ > 3^\circ$

B. $3^\circ > 2^\circ > 1^\circ$

C. Same in all cases

D. None of these

Answer: A

Watch Video Solution

95. Ethylene may be obtained by dehydration of which of the following with concentrated H_2SO_4 at $160 - 170^\circ C$

A. C_2H_5OH

B. CH_3OH

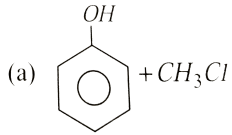
C. $CH_3CH_2CH_2OH$

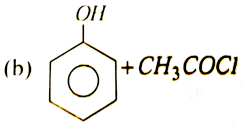
D. $(CH_3)_2CHCH_2OH$

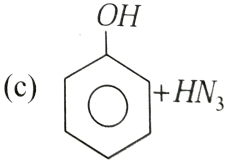
Answer: A

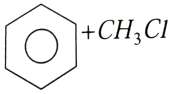
Watch Video Solution

96. In Friedel-Crafts acylation, besides $AlCl_3$, the other reactants are

A. 

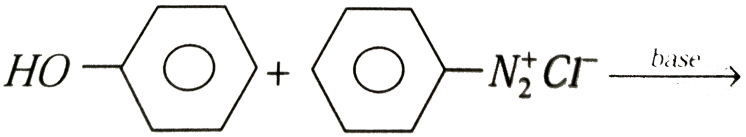
B. 

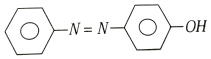
C. 

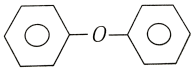
D. (d) 

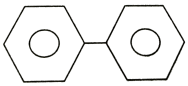
Answer: B

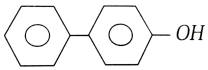
Watch Video Solution

97. 

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: A

Watch Video Solution

98. Which of the following gives ketone on oxidation

A. $(CH_3)_3COH$

B. $CH_3CH_2CH_2OH$

C. $(CH_3)_2CHCH_2OH$

D. $CH_3CHOHCH_3$

Answer: D

Watch Video Solution

99. The reagent used in the conversion of 1-butanol to 1-bromobutane is :

A. $CHBr_3$

B. Br_2

C. CH_3Br

D. PBr_3

Answer: D

Watch Video Solution

100. Which one of the following reactions does not yield and alkyl halide?

A. Diethyl ether $+Cl_2$

B. Diethyl ether $+Hl$

C. Diethyl ether and PCl_5

D. Diethyl ether $\xrightarrow{\text{Reactant}} X \xrightarrow{SO_2Cl_2}$

Answer: A

Watch Video Solution

101. What are X and Y in the following reaction sequence :

$C_2H_5OH \xrightarrow{Cl_2} (X) \xrightarrow{Cl_2} (Y)$

A. C_2H_5Cl, CH_3CHO

B. CH_3CHO, CH_3CO_2H

C. CH_3CHO, CCl_3CHO

D. C_2H_5Cl, CCl_3CHO

Answer: C

Watch Video Solution

102. Phenol is more acidic than ethanol due to

A. Inductive effect

B. Resonance effect

C. Hybridisation

D. H-bonding

Answer: B

Watch Video Solution

103. Among the following the one that gives positive iodoform test upon reaction with I_2 and $NaOH$ is :

A. $CH_3CH_2CH(OH)CH_2CH_3$

B. $C_6H_5CH_2CH_2OH$

C. $CH_3 - \overset{CH_3}{\underset{|}{C}}HCH_2OH$

D. $PhCHOHCH_3$

Answer: D

Watch Video Solution

104. Zeisel method is used to estimate :

A. Alcoholic group

B. Amino group

C. Methoxy group

D. Halo group

Answer: C

Watch Video Solution

105. The calcohol which easily reacts with conc. HCI is

A. $CH_3 - CHOH - CH_2 - CH_3$

B. $(CH_3)_3 - C - OH$

C. $CH_3 - CH_2 - CH_2 - CH_2 - OH$

D. $(CH_3)_3 - CH - CH_2OH$

Answer: B

Watch Video Solution

106. In fermentation by zymase , alcohol and CO_2 are obtained from the following sugar

A. Glucose

B. Invert sugar

C. Fructose

D. All of these

Answer: A

Watch Video Solution

107. Phenol $\xrightarrow[\text{distillation}]{Zn} A \xrightarrow[Conc.HNO_3]{Conc.H_2SO_4} B \xrightarrow[NaOH]{Zn} C$

In the above reaction A, B and C are the following compounds

A. C_6H_6, $C_6H_5NO_2$ and aniline

B. C_6H_6 di-nitrobenzene and meta-nitroaniline

C. Toluene, meta-nitrobenzene and meta-toluedine

D. C_6H_6, $C_6H_5NO_2$ and hydrazobenzene

Answer: D

Watch Video Solution

108. Rate of substitution reaction in phenol is-

A. Slower than the rate of benzene

B. Faster than the rate of benzene

C. Equal to the rate of benzene

D. None of these

Answer: B

Watch Video Solution

109. Reaction of phenol with dil. HNO_3 gives

A. p and m-nitrophenols

B. o- and p-nitrophenols

C. Picric acid

D. o- and m-nitrophenols

Answer: B

Watch Video Solution

110. $Ch_3 - O - C_3H_7$ and $C_2H_5 - O - C_2H_5$ exhibit which type of isomerism

A. Metamerism

B. Position

C. Chain

D. Functional

Answer: A

Watch Video Solution

111. Phenol is

A. A weaker base than NH_3

B. Stronger than carbonic acid

C. Weaker than carbonic acid

D. A neutral compound

Answer: C

Watch Video Solution

112. Which statement is true

A. C_6H_5OH is more acidic than C_2H_5OH

B. C_6H_5OH is less acidic than C_2H_5OH

C. C_6H_5OH react with $NaHCO_3$

D. C_6H_5OH gives oxime with NH_2OH and HCl

Answer: A

Watch Video Solution

113. Which compound has hydrogen bonding

A. Toluene

B. Phenol

C. Chlorobenzene

D. Nitrobenzene

Answer: B

Watch Video Solution

114. Methanol and ethanol are distinguished by the :

A. Action of HCl

B. Iodoform test

C. Solubility in water

D. Sodium

Answer: B

Watch Video Solution

115. Which of the following is most soluble in water

A. Normal butyl alcohol

B. Isobutyl alcohol

C. Tertiary butyl alcohol

D. Secondary butyl alcohol

Answer: C

Watch Video Solution

116. What amount of bromine will be required to convert $2g$ of phenol into $2, 4, 6 -$ tribromphenol

A. 4.00

B. 6.00

C. 10.22

D. 20.44

Answer: C

Watch Video Solution

117. The reaction of ethylene glycol with PI_3 gives :

A. ICH_2CH_2I

B. $CH_2 = CH_2$

C. $CH_2 = CHI$

D. $ICH = CHI$

Answer: B

Watch Video Solution

118. In the sequence of following reactions : $CH_3OH \xrightarrow{HI} CH_3I \xrightarrow{KCN} CH_3CN \xrightarrow{\text{Reduction}} X \xrightarrow{HNO_2} Y, X$ and Y are respectively

A. $CH_3CH_2NH_2$ and CH_3CH_2OH

B. $CH_3CH_2NH_2$ and CH_3COOH

C. CH_3CH_2OH and CH_3CHO

D. CH_3OCH_3 and CH_3CHO

Answer: A

Watch Video Solution

119. In the following reaction

$C_2H_5OC_2H_5 + 4H \xrightarrow{RedP+HI} 2X + H_2O$ X is

A. Ethane

B. Ethylene

C. Butane

D. Propane

Answer: A

Watch Video Solution

120. When a mixture of iodine , alcohol and aqueous sodium carbonate are heated, the product formed is

A. Sodium formate and chloroform

B. Only CO_2

C. Iodoform and sodium formate

D. Ethyl carbonate and sodium iodide

Answer: C

Watch Video Solution

121. Dehydration of glycerol produces

A. Propanone

B. Allyl alcohol

C. Acrolein

D. Benzene

Answer: C

Watch Video Solution

122. The detection of leakage from LPG Cylinders si facilitated by the addition of

A. Phenols

B. Glycols

C. Thioalcohols

D. Alcohol

Answer: C

Watch Video Solution

123. Primary , Secondary and Tertiary alcohols can be distinguished by

A. Oxidation

B. Victormryer's test

C. Lucas reagent

D. All of these

Answer: D

Watch Video Solution

124. The adduct of the compound 'A' obtained by the reaction with excess of isopropyl magnesium iodide , upon hydrolysis gives a tertiary alcohol. The compound 'A' is

A. An ester

B. A secondary alcohol

C. A primary alcohol

D. An aldehyde

Answer: A

Watch Video Solution

125. Which alcohol reacts with fatty acids to form fats

A. Ethanol

B. Glycerols

C. Methanol

D. Isopropanol

Answer: B

Watch Video Solution

126. If ethanol dissolves in water, then which of the following would be done

A. Absorption of heat and contraction in volume

B. Emission of heat and contraction in volume

C. Absorption and heat and increase in volume

D. Emission of heat and increase in volume

Answer: B

Watch Video Solution

127. The reagent which easily reacts with ethanol and propanol is

A. Fehling solution

B. Grignard reagent

C. Schiff reagent

D. Tollen reagent

Answer: B

Watch Video Solution

128. Which one of the following properties is exhibited by phenol ?

A. It is soluble in aq. NaOH and envolves CO_2 with aq. $NaHCO_3$

B. It is soluble in aq. NaOH and does not envolve CO_2 with aq. $NaHCO_3$

C. It is not soluble in aq. NaOH but envolves CO_2 with aq. $NAHCO_3$

D. It is insoluble in aq. NaOH and does not envovle CO_2 with aq. $NaHCO_3$

Answer: B

Watch Video Solution

129. Which one of the following reaction would produce secondary alcohol?

A. $C_6H_5\overset{\overset{O}{||}}{C}CH_3$underset(2.H^(+))overset(1.CH_(3)MgBr)to`

B. $C_6H_5\overset{\overset{O}{||}}{C}CH_3 \xrightarrow[2.H^+]{1.LiA1H_4}$

C. $CH_3CHO \xrightarrow[2.H^+]{1.LiA1H_4}$

D. $CH_3\overset{\overset{O}{||}}{C}CH_3 \xrightarrow[2.Br_2]{1.OH^-}$

Answer: B

Watch Video Solution

130. Lucas test is used to distinguish between

A. 1° , 2° and 3° alcohols

B. 1°, 2° and 3° amines

C. Aldehydes and ketones

D. Alkenes and alkynes

Answer: A

Watch Video Solution

131. Sodium pheoxide reacts with CO_2 at $400K$ and $4-7$ atm pressure to give

A. Sodium salicylate

B. Salicylaldehyde

C. Catechol

D. Benzoic acid

Answer: A

Watch Video Solution

132. The reaction of C_2H_5OH with H_2SO_4 does not give

A. Ethylene

B. Diethyl ether

C. Acetylene

D. Ethyl hydrogen sulphate

Answer: C

Watch Video Solution

133. The order of stability of carbonium ions is

A. Methyl $>$ ethyl $>$ iso-propyl $>$ tert-butyl

B. Tert-butyl $>$ iso-propyl $>$ ethyl $>$ methyl

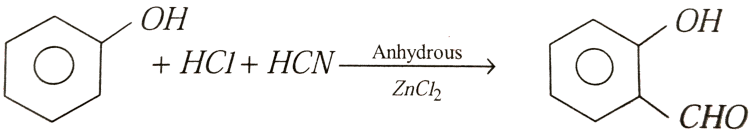
C. Iso-propyl $>$ tert-butyl $>$ ethyl $>$ methyl

D. Tert-butyl $>$ ethyl $>$ iso-propyl $>$ methyl

Answer: B

Watch Video Solution

134. The following reaction



A. Perkin reaction

B. Gattermann reaction

C. Kolbe reaction

D. Gattermann -koch reaction

Answer: B

Watch Video Solution

135. Methy1 – tert-buty1 ether on heating with HI of one molar concentration gives

A. $CH_3I + (CH_3)_3COH$

B. $CH_3OH + (CH_3)_3Cl$

C. $CH_3I + (CH_3)_3Cl$

D. None of the above

Answer: A

Watch Video Solution

136. The alcohol which does not give a stable compound on dehydration is

A. Ethyl alcohol

B. Methyl alcohol

C. n-propyl alcohol

D. n-butyl alcohol

Answer: B

Watch Video Solution

137. The reagent used for the dehydration of an alcohol is

A. Phosphorus pentachloride

B. Calcium chloride

C. Aluminium oxide

D. Sodium chloride

Answer: C

Watch Video Solution

138. The compound `'A' when trated with ceric ammonium nitrate solution gives yellow ppt. the compound 'A' is

A. Alcohol

B. Aldehyde

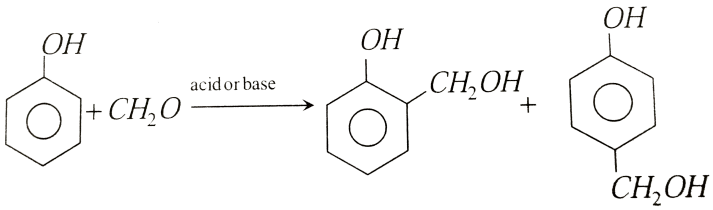
C. Acid

D. Alkane

Answer: A

Watch Video Solution

139. Reaction



is called

A. Lederer manasse reaction

B. Claisen condensation

C. Benzoin condensation

D. Etard reaction

Answer: A

Watch Video Solution

140. Which compound has the highest boiling point

A. Acetone

B. Diethyl ether

C. Methanol

D. Ethanol

Answer: D

Watch Video Solution

141. The process used in conversion of triolein to tristerin is

A. Hydrolysis

B. Hydration

C. Hydrogenation

D. Dehydrogenation

Answer: C

Watch Video Solution

142. $2\text{-propanol} + NaBr \xrightarrow{\text{Reflux}} X$. What is X ?

A. 2-bromopropane

B. Propane

C. Propene

D. Propanone

Answer: A

Watch Video Solution

143. Phenol $\xrightarrow[\Delta]{Zn} X$. The compound X on acylation gives aliphatic aromatic ketone. The reaction is :

A. Gattermann reaction

B. Friedal-craft reaction

C. Wurtz reaction

D. None of these

Answer: B

Watch Video Solution

144. Ethyl lcohol on oxidation with $K_2Cr_2O_7$ gives

A. Acetic acid

B. Acetaldehyde

C. Formaldehyde

D. Formic acid

Answer: A

Watch Video Solution

145. The role of concentrated H_2SO_4 in the esterification process is :

A. Catalyst

B. Dehydrating agent

C. Hydrolysing agent

D. Dehydrating agent & catalyst

Answer: D

Watch Video Solution

146. $CH_3 - CH = CH - CH(OH) - CH_3 \xrightarrow[\text{reagent}]{\text{Jone's}} X$, Product X is

A. $CH_3CH_2CH_2CH(OH)CH_3$

B. $CH_3CH = CHCOCH_3$

C. Both (a) & (b) are correct

D. $CH_3CH_2CH_2COCH_3$

Answer: B

Watch Video Solution

147. Reaction : $CH_3OH + O_2 \xrightarrow[Ag]{600^\circ}$ product

The product is

A. $CH_2 = C = O$

B. $H_2C = O$

C. C_2H_4

D. C_2H_2

Answer: B

Watch Video Solution

148. $A \xleftarrow[\Delta]{Cu} CH_3CH_2OH \xrightarrow[\Delta]{Al_2O_3} B.$

A and B respectively are :

A. Alkene, Alkanal

B. Alkyne, alkanal

C. Alkanal, alkene

D. Alkene, alkyne

Answer: C

Watch Video Solution

149. Electrophilic subsitution reaction in phenol take place at :

A. p-position

B. m-position

C. o-position

D. o-and p-position

Answer: D

Watch Video Solution

150. Alcohol which gives red colour with Victor Meyer test is

A. C_2H_5OH

B. $CH_3 - \underset{\underset{OH}{|}}{C}H - CH_3$

C. $C(CH_3)_3OH$

D. None of these

Answer: A

Watch Video Solution

151. During the dehydration of alcohols to alkenes by heating with conc. H_2SO_4, the initiating step is :

A. Protonation of alcohol molecule

B. Formation of carbocation

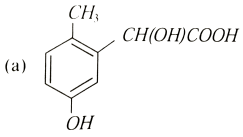
C. Elimination of water

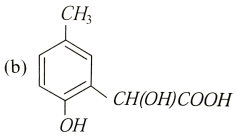
D. Formation of an ester

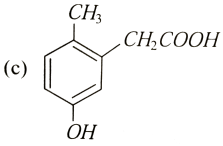
Answer: A

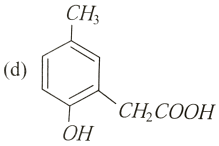
Watch Video Solution

152. p-cresol reacts with chloroform in alkaline medium to give the compound A which adds hydrogen cyanide to form, the compound B. the latter on acidic hydrolysis gives chiral caboxylic acid. The structure of the carboxylic acid is

A. 

B. 

C. 

D. 

Answer: B

Watch Video Solution

Watch Video Solution

153. Phenyl magnesium bromide reacts with methanol to give :-

A. A mixture of anisole and Mg(OH)Br

B. A mixture of benzene and Mg(Ome)Br

C. A mixture to toluence and Mg(OH)Br

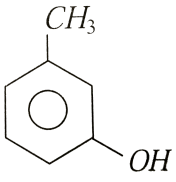
D. A mixture of phenol and Mg(Me)Br

Answer: B

Watch Video Solution

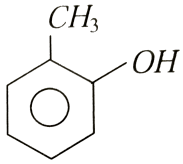
154. The structure of the compound that gives a tribromo derivation on treatment with bromine water is

A. (a)



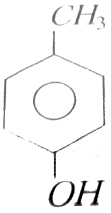
B.

(c)



C.

(d)



D.

Answer: A

View Text Solution

155. $CH_3CH_2OH \xrightarrow{P+I_2} A \xrightarrow[\text{ether}]{\text{Mg}} B \xrightarrow{HCHO} C \xrightarrow{H_2O} D$

The product 'D' is-

A. Butanal

B. n-butyl alcohol

C. n-propyl alcohol

D. Propanal

Answer: C

Watch Video Solution

156. Phenol , when first reacts with concentrated sulphuric acid and then when concentrated nitric acid, gives

A. o-nitrophenol

B. p-nitrophenol

C. Nitrobenzene

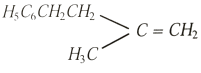
D. 2,4,6-trinitrophenol

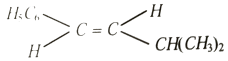
Answer: D

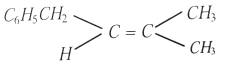
Watch Video Solution

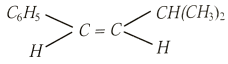
157. The main product of the following reaction is

$$C_6H_5CH_2CH(OH)CH(CH_3)_2 \xrightarrow{conc.\,H_2SO_4}$$

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: B

View Text Solution

158. Phenol is heated with a solution of mixture of KBr and $KBrO_3$. The major product obtained in the above reaction is

A. 2-bromophenol

B. Tollen's bromophenol

C. 4-bromophenol

D. 2,4,6-tribromophenol

Answer: D

Watch Video Solution

159. Which of the following reagents may be used to distinguish between phenol and beznoic acid ?

A. Aqueous NaOH

B. Tollen's reagent

C. Molisch reagent

D. Neutral $FeCl_3$

Answer: D

Watch Video Solution

160. Sodium ethoxide has reacted with ethanoyl chloride. The compound that is produced in the above reaction is

A. Diethyl ether

B. 2-butanone

C. Ethyl chloride

D. Ethyl ethanoate

Answer: D

Watch Video Solution

161. Ortho -nitrophenol is less soluble in water than p-and $m-$ nitrophenols because

A. o-nitrophenol is more volatile steam than those of m-and p-isomers

B. o-nitrophenol shows intramolecular H-bonding

C. o-nitrophenol shows intermolecular H-bonding

D. Melting point of o-nitrophenol is lower than those of m- and p-isomers

Answer: B

Watch Video Solution

162. What is the hybridization of oxygen atom in an alcohol molecule

A. sp^3

B. sp

C. sp^2

D. p^2

Answer: A

Watch Video Solution

163. Which one of the following is correct

A. $RCH_2OH \xrightarrow{KMnO_4}$ No reaction

B. $CH_3CH_2OH \xrightarrow{Na_2Cr_2O_7 + H_2SO_4}$ No reaction

C. $CH_3CHO \xrightarrow{Na_2Cr_2O_7 + H_2SO_4}$ No reaction

D. $CH_3 - \underset{CH_3}{\overset{CH_3}{\underset{|}{\overset{|}{C}}}} - OH \xrightarrow{\text{alkaline} KMnO_4}$ No reaction

Answer: D

Watch Video Solution

164. Which one of the following products obtained when diethyl when diethyl ether is boiled with water in presence of dilute acid

A. Glycol

B. Ethyl alcohol

C. Ethylene oxide

D. Peroxide

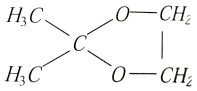
Answer: B

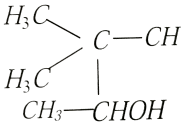
Watch Video Solution

165. Identify the product for the following reaction

$$CH_3 - \overset{\overset{O}{||}}{C} - CH_3 + \begin{matrix} CH_2OH \\ | \\ CH_2OH \end{matrix} \overset{HCl}{\Longleftrightarrow}$$

A. $CH_3 - \overset{\overset{CH_3}{|}}{C}HOH + \overset{\overset{COOH}{|}}{C}OOH$

B. (b) 

C. (c) 

D. No reaction

Answer: B

View Text Solution

166. Anisole is the product obtained from phenol by the reaction known as :

A. Coupling

B. Etherification

C. Oxidation

D. Esterification

Answer: B

Watch Video Solution

167. Ethylene gylcol gives oxalic acid on oxidation with

A. Acidified $K_2Cr_2O_7$

B. Acidified $KMnO_4$

C. Alkaline $KMnO_4$

D. Periodic acid

Answer: A

Watch Video Solution

168. Acetyl chloride does not react with

A. Diethyl ether

B. Aniline

C. Phenol

D. Ethanol

Answer: A

Watch Video Solution

169. A compound X of formula C_3H_8O yields a compound C_3H_6O, on oxidation. To which of the following classes of compounds could X being

A. Secondary alcohol

B. Alkene

C. Aldehyde

D. Tertiary alcohol

Answer: A

Watch Video Solution

170. The boiling point of alcohol are .... Than corresponding thiols.

A. More

B. Same

C. Either of these

D. Less

Answer: A

Watch Video Solution

171. Fats on alkaline hydrolysis, give

A. Oils

B. Soaps

C. Detergents

D. Glycol + acid

Answer: B

Watch Video Solution

172. Butanal with dilute NaOH gives

A. $CH_3CH_2CH_2\underset{H}{\overset{OH}{\underset{|}{\overset{|}{C}}}}CH_2CH_2CH_2CH_2OH$

B. $CH_3CH_2CH_2\overset{\overset{O}{\|}}{C}CHOCH_2CH_2CHO$

C. $OHCCH_2CH_2CH_2CH_2CH_2CH_2CHO$

D. $CH_3CH_2CH_2\overset{\overset{OH}{|}}{\underset{\underset{H}{|}}{C}} - \overset{}{\underset{\underset{CH_3}{|}}{\underset{\underset{CH_2}{|}}{C}}}HCHO$

Answer: D

Watch Video Solution

173. Reaction of phenol with chloroform / sodium hydroxide to give $o-$ hydroxy benzaldehyde involves the formation of

A. Dichloro carbene

B. Trichloro carbene

C. Chlorine atoms

D. Chlorine melcules

Answer: A

Watch Video Solution

174. Which is not correct

A. Phenol is more acidic than acetic acid

B. Ethanol is less acidic than phenol

C. Ethanol has lower boiling point than ethane

D. Ethyne is a non-linear molecules

Answer: A::C::D

Watch Video Solution

175. In the following reaction, X and Y respectively are

$$C_2H_5OH \xrightarrow{KMnO_4/H^+} X \xrightarrow[H_2SO_4/\Delta]{Y} CH_3CO_2C_2H_5$$

A. CH_3OH, C_2H_5OH

B. CH_3CHO, CH_3OH

C. CH_3CO_2H, C_2H_5OH

D. C_2H_4, CH_3CO_2H

Answer: C

Watch Video Solution

176. Glycerol on oxidation with bismuth nitrate forms

A. Mesoxalic acid

B. Glyceraldehyde

C. Dihydroxy acetone

D. Tartaric acid

Answer: A

Watch Video Solution

177. Ethyl alcohol cannot be used as solvent for methyl magnesium iodide because

A. Methyl magnesium iodide react with alcohol giving methane

B. The reaction between them is explosive in nature

C. Methyl magnesium iodide is converted to ethyl magnesium iodide

D. Alcohol is immiscible with methyl magnesium iodide

Answer: A

Watch Video Solution

178. Phenol reacts with bromine in chloroform at low temperature to give

A. m-bromophenol

B. Mixture of ortho and para bromophenol

C. p-bromophenol

D. 2,4,6-tribromophenol

Answer: B

Watch Video Solution

179. Formation of methyl tertiary butyl ether by the reaction of sodium tertiary butoxide and methyl bromide involves.

A. Elimination reaction

B. Electrophilic addition reaction

C. Nucleophilic addition reaction

D. Nucleophilic substitution reaction

Answer: D

Watch Video Solution

180. When $FeCl_3$ is added to phenol :

A. No reaction occurs

B. A coloured complex will be formed

C. Fe^{3+} will be oxidized to higher state

D. o-Chlorophenol will be formed

Answer: B

Watch Video Solution

181. Which of the following compounds is oxidised to prepare methyl ethyl ketone?

A. 2- propanol

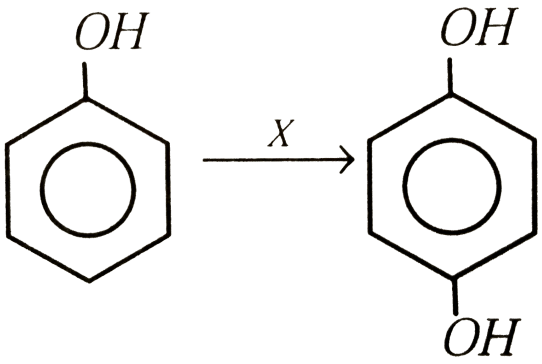
B. 1-butanol

C. 2-butanol

D. Tert-butyl alcohol

Answer: C

Watch Video Solution



. X is

182.

A. Air

B. $KMnO_4 / H_2SO_4$

C. $K_2S_2O_8$

D. K_2SO_5

Answer: C

Watch Video Solution

183. C_2H_5OH and C_6H_5OH can be distinguished by

A. $Br_2 + H_2O$

B. $FeCl_3$

C. $I_2 + NaOH$

D. Both (a) and (c)

Answer: D

Watch Video Solution

184. $C_6H_5MgBr + O_2 \xrightarrow{\text{heat}} X$, X is

A. C_6H_6

B. $C_6H_5OC_6H_5$

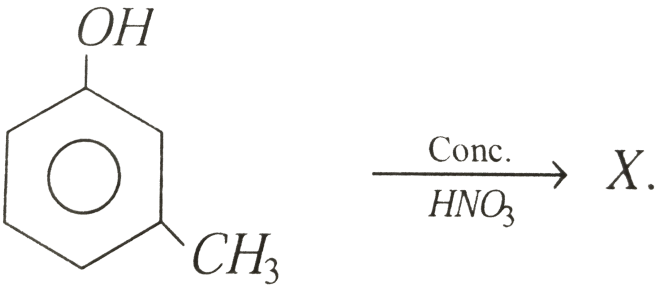
C. C_6H_5OMgBr

D. C_6H_5CHO

Answer: C

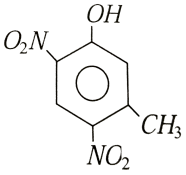
Watch Video Solution

185. In the reaction for dinitration

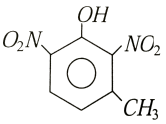


The major dinitrated product X is

A. (a)

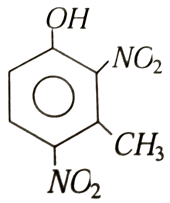


B. (b)



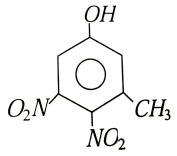
C.

(c)



D.

(d)



Answer: A

Watch Video Solution

186. The function of $ZnCl_2$ in Lucas test for alcohols is

A. To act as acid catalyst and react with HCl to form H_2ZnCl_4

B. To act as base catalyst and react with NaOH to form $Na_2Zn(OH)_4$

C. To act as amphoteric catalyst

D. To act as neutral catalyst

Answer: A

Watch Video Solution

187. The mixture of ethanol and water cannot be separated by distillation because

A. They fomr a constant boiling mixture

B. Alcohol molecules are solvaled

C. Their boiling points are very near

D. Alcohol remains dissolved in water

Answer: A

Watch Video Solution

188. Ether is formed when Ethyl alcohol is heated with conc. H_2SO_4The conditions are

A. Excess of H_2SO_4 and 170°C

B. Excess of C_2H_5OH and $140^\circ C$

C. Excess of C_2H_5OH and $180^\circ C$

D. Excess of conc. H_2SO_4 and $100^\circ C$

Answer: B

Watch Video Solution

189. Rectified spirit obtained by fermentation contains 4.5% of water. So in order to remove it, rectified spirit is mixed with suitable quantity of benzene and heated. Benzene helps because

A. It is dehydrating agent and so removes water

B. If forms the lower layer which retains all the water so that alcohol can be distilled off

C. If forms an azeotropic mixture hivaing high boiling point and thus allows the alcohol to distill over

D. It forms low boiling azeotropic mixtures wich distill over, leaving behind pure alcohol which can then be distilled

Answer: D

Watch Video Solution

190. Glycerol was distilled with oxalic and crystals and the products were led into fehling solution and warmed . Cuprous oxide was precipitated . It is due to

A. CO

B. HCHO

C. CH_3CHO

D. $HCOOH$

Answer: D

Watch Video Solution

191. A mixture of methanol vapours and air is passed over heated copper. The products are

A. Carbon monoxide and hydrogen

B. Formladehyde and water vapour

C. Formic acid and water vapour

D. Carbon monoxide and water vapour

Answer: B

Watch Video Solution

192. The $-OH$ group of Methyl alcohol cannot be replaced by chlorine by the the action of

A. Chlorine

B. Hydrogen chloride

C. Phosphorus trichloride

D. Phosphorus pentachloride

Answer: A

Watch Video Solution

193. An organic liquid A containing C, H and O has a pleasant odour with a boiling point of $78^{\circ} C$. On boiling. A with conc. H_2SO_4 a colourless gas is produced which decolourises bromine water and alkaline $KMnO_4$. One mole of this gas also takes one mole of H_2. The organic liquid A is

A. C_2H_5Cl

B. C_2H_5CHO

C. C_2H_6

D. C_2H_5OH

Answer: D

Watch Video Solution

194. An organic compound X on treatement with acidified $K_2Cr_2O_7$ gives a compound Y which reats with I_2 and sodium carbonate to form tri-iodomethane. The compound X is

A. CH_3OH

B. $CH_3 - CO - CH_3$

C. CH_3CHO

D. $CH_3CH(OH)CH_3$

Answer: D

Watch Video Solution

195. Liebermann's test is answered by

A. Aniline

B. Methylamine

C. Ethyl benzoate

D. Phenol

Answer: D

Watch Video Solution

196. The compound obtained by heating salicylic acid with phenol in the presence of phoshorus oxychloride is

A. Salol

B. Aspirin

C. Oil of wintergreen

D. o-chlorobenzoyl choride

Answer: A

Watch Video Solution

197. Propene is the product obtained by dehydration of

A. 2-propanol

B. 1-propanol

C. Propanal

D. n-propyl alcohol

Answer: A

Watch Video Solution

198. A compound that easily undergoes bromination is

A. Phenol

B. Toluence

C. Benzene

D. Benzoic acid

Answer: A

Watch Video Solution

199. One mole of an organic compound A with the formula C_3H_8O reacts completely with two moles of HI to form X and Y. When Y is boiled with aquous alkali it forms Z.Z answers the iodoform test. The compound A is

A. Propan-2-ol

B. Propan 1-ol

C. Ethoxygethane

D. Methoxyethane

Answer: D

Watch Video Solution

200. An oxygen containing organic compound upon oxidation forms a carboxylic acid as the only organic product with its molecular mass higher by 14 units. The organic compound is

A. An aldehyde

B. A primary alcohol

C. A secondary alcohol

D. A ketone

Answer: B

Watch Video Solution

201. Glycerol on reaction with $NaHCO_3$ gives

A. Acrolein

B. Acetic acid

C. Formic acid

D. Propanol

Answer: A

Watch Video Solution

202. Benzoylation of phenol in alkaline medium is known as :

A. Friedel Craft reaction

B. Wurtz-Fittig reaction

C. Schotten-Baumann reaction

D. Sabatier-Senderen reaction

Answer: C

Watch Video Solution

203. Which statement is incorrect

A. Phenol is a weak acid

B. Phenol is an aromatic compound

C. Phenol liberates CO_2 from Na_2CO_3 solution

D. Phenol is soluble in NaOH

Answer: C

Watch Video Solution

204. Which of the following compounds shows evidence of the strongest hydrogen bonding?

A. Propane-1-ol

B. Propane-2-ol

C. Propane-1,2-diol

D. Propane-1,2,3-triol

Answer: D

Watch Video Solution

205. The order of melting point of ortho, para, meta nitrophenol is

A. $o > m > p$

B. $p > m > o$

C. $m > p > o$

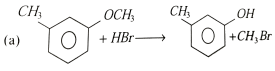
D. $p > o > m$

Answer: B

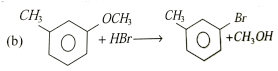
Watch Video Solution

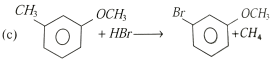
206. Which of the following reactions is correctly represented?

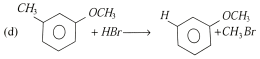
A.



B.



C. 

D. 

Answer: A

Watch Video Solution

207. Tertiary butyl alcohol gives tertiary butyl chloride on treatment with

A. Conc. HCl/anhydrous $ZnCl_2$

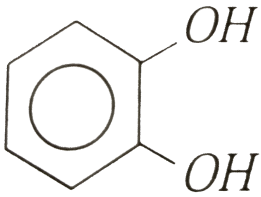
B. KCN

C. NaOCl

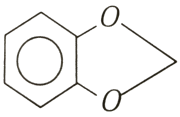
D. Cl_2

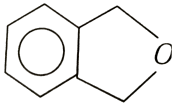
Answer: A

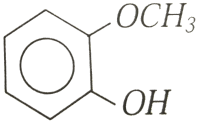
Watch Video Solution

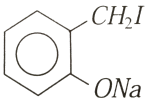
208.  $+CH_2I_2+NaOH\rightarrow$

The product is

A. (a) 

B. (b) 

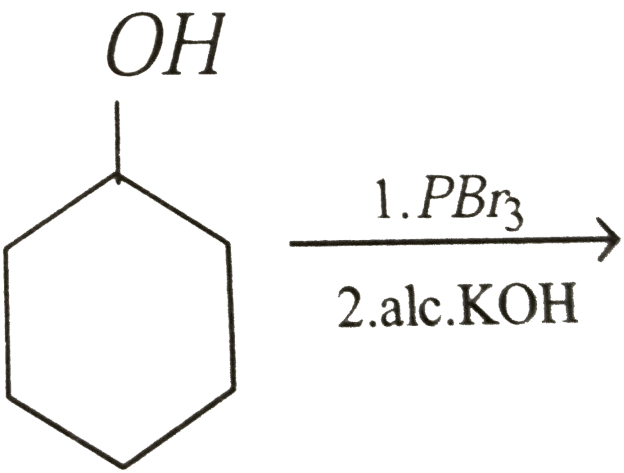
C. (c) 

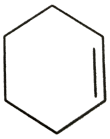
D. (d) 

Answer: A

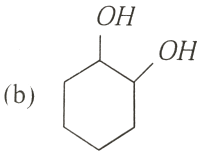
Watch Video Solution

209. Predict the product

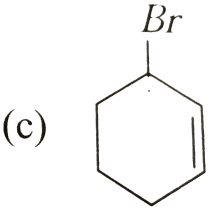


(a) 

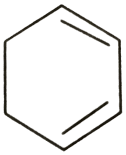
A.



B.



C.

D. (d) 

Answer: A

Watch Video Solution

210. The first step in Bakelite formation is

A. Aromatic nucleophilic substitution

B. Aromatic electrophilic substitution

C. Condensation

D. Electrophilic addition

Answer: B

Watch Video Solution

211. For the reaction,

$(CH_3)_2CH - CH = CH_2 + C_2H_5OH \rightarrow$ Product the catalyst that can be used is :

A. Dilute H_2SO_4

B. Dilute $NaOH$

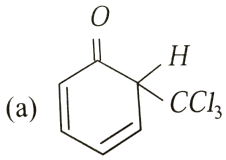
C. Dilute NaCl

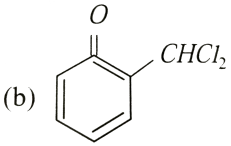
D. None of these

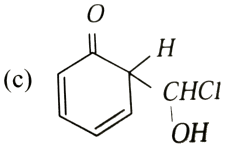
Answer: A

Watch Video Solution

212. When phenol is treated with $CHCl_3$ and NaOH, followed by acidification salicylaldehyde is obtained. Which of the following species are involved in the above mentioned reaction as intermediate?

A. 

B. 

C. 

D. All of these

Answer: B

Watch Video Solution

213. Iodoform reaction is shown by

A. $CH_3CH_2CH_2CH(OH)CH_3$

B. $C_2H_5OC_2H_5$

C. $CH_3CH_2CH_2CH_2OH$

D. $(CH_3)_3COH$

Answer: A

Watch Video Solution

214. In the reaction given below, X is

Neopentyl alcohol $\xrightarrow{H_2SO_4} X$

A. 2-methypentane

B. 2-methylpent-2-ene

C. 2-methylbut-2-ene

D. Neo-pentane

Answer: C

Watch Video Solution

215. Which of the following would undergo dehydration most readily

A. 1-phenyl-1 butanol

B. 2-phenyl-2 butanol

C. 1-phenyl-2 butanol

D. 2-phenyl-1-butanol

Answer: C

Watch Video Solution

216. The vapour pressure of aqueous solution of methanol is

A. Equal to water

B. Equal to methanol

C. More than water

D. Less than water

Answer: C

Watch Video Solution

217. A compound does not react with 2,4 di-nitrophenyl hydrazine and Na, compound is

A. Acetone

B. Acetaldehyde

C. CH_3OH

D. $CH_2 = CHOCH_3$

Answer: D

Watch Video Solution

218. The dehydration of 2-methyl butanol with conc. H_2SO_4 gives

A. 2-methyl butene as major product

B. Pentene

C. 2-methyl but-2-ene as major product

D. 2-methyl pent-2-ene

Answer: A

Watch Video Solution

219. Which of the following explains the viscous nature of glycerol ?

A. Covalent bonds

B. Hydrogen bonds

C. Vander Waal's forces

D. Ionic forces

Answer: B

Watch Video Solution

220. The ether that undergoes electrophilic substitution reactions is

A. $CH_3OC_2H_5$

B. $C_6H_5OCH_3$

C. CH_3OCH_3

D. $C_2H_5OC_2H_5$

Answer: B

Watch Video Solution

221. Calculate the number of metamers represented by molecular formula $C_4H_{10}O$.

A. 4

B. 3

C. 2

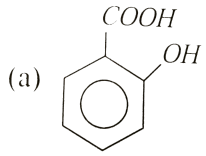
D. 1

Answer: B

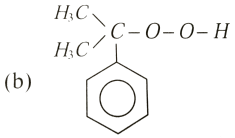
Watch Video Solution

222. Phenol is distilled with Zn dust followed by Fridel Crafts alkylation with propyl chloride in the presence of $AlCl_3$ to give a compound (B).(B) is oxidised in the presence of air to form the compound (C). The structural formula of (C) is

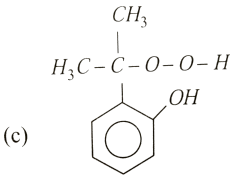
A.

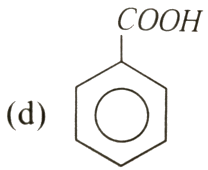


B.



C.



D. (d) 

Answer: B

Watch Video Solution

223. Number of isomeric alcohols of molecular fomula of $C_6H_{14}O$ which give positive iodoform test is

A. Three

B. Four

C. Five

D. Two

Answer: B

Watch Video Solution

224. Addition of alcohols to aldehydes in presence of anhydrous acids yield:

A. Carboxylic acids

B. Ethers

C. Cyclic ethers

D. Acetals

Answer: D

Watch Video Solution

225. Ether which is liquid at room temperature is

A. $C_2H_5OCH_3$

B. CH_3OCH_3

C. $C_2H_5OC_2H_5$

D. None of these

Answer: B

Watch Video Solution

226. Which reagent can convert acetic acid into ethanol

A. $Na +$ alcohol

B. $LiAlH_4$ + ether

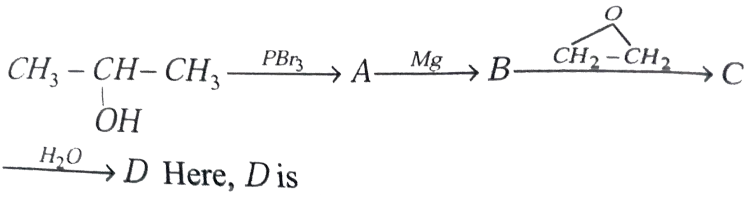
C. $H_2 + Pt$

D. $Sn + HCl$

Answer: D

Watch Video Solution

227. Complete the following reaction



Here, D is

A. $Ch_3 - \underset{\underset{CH_3}{|}}{C}\ H - O - Ch_2 - CH_3$

B. $CH_3 - O - \underset{\underset{CH_3}{|}}{C}\ H - CH_2CH_3$

C. $CH_3 - \underset{\underset{CH_3}{|}}{C}\ H - CH_2CH_2OH$

D. $CH_3 - CH_2 - \underset{\underset{CH_3}{|}}{C}\ H - CH_2OH$

Answer: D

Watch Video Solution

228. An alcohol on oxidation is found to give CH_3COOH and CH_3CH_2COOH. The structure to the alcohol is

A. $CH_3CH_2CH_2OH$

B. $(CH_3)_3C(OH)CH_2CH_3$

C. $CH_3CH_2CHOHCH_3$

D. $CH_3CH(OH)CH_2CH_2CH_3$

Answer: A

Watch Video Solution

229. In the following series of chemical reactions identify Z

$$C_3H_7OH \xrightarrow[160-180^\circ C]{Conc.H_2SO_4} X \xrightarrow{Br_2} Y \xrightarrow[Alc.KOH]{\text{Excess of}} Z$$

A. $CH_3-\underset{\underset{NH_3}{|}}{C}H-\underset{\underset{NH_2}{|}}{C}H_2$

B. $CH_3-\underset{\underset{OH}{|}}{C}H-\underset{\underset{OH}{|}}{C}H_2$

C. $CH_3-\underset{\underset{OH}{|}}{C}=CH_2$

D. $CH_3C\equiv CH$

Answer: D

Watch Video Solution

230. A substance $C_4H_{10}O$ yields on oxidation a compound C_4H_8O which gives an oxime and a positive iodoform test. The original substance on treatment with conc. H_2SO_4 gives C_4H_8 . The structure of the compound is

A. $CH_3CH_2CH_2CH_2OH$

B. $CH_3Ch(OH)CH_2CH_3$

C. $(CH_3)_3COH$

D. $CH_3CH_2 - O - CH_2CH_3$

Answer: A

Watch Video Solution

231. The correct order of the solubility of the different alcohols in water is

A. n-propyl alcohol $>$ ethyl alcohol $>$ n-butyl alcohol

B. Ethyl alcohol $>$ n-butyl alcohol $>$ n-propyl alcohol

C. n-butyl alcohol $>$ n-propyl alcohol $>$ ethyl alcohol

D. Ethanol $>$ n-propanol alcohol $>$ ethyl alcohol

Answer: A

Watch Video Solution

232. Which of the following alcohol has highest solubility in water

A. Secondary butyl alcohol

B. Tertiary butyl alcohol

C. Ethelene glycol

D. Glycerol

Answer: A

Watch Video Solution

233. In which of the following reactions of alcohol there is no cleavage of C-O bond

A. Oxidation reaction of alcohol

B. Dehydration reaction of alcohol

C. Reduction reaction of alcohol

D. Reaction of alcohol with phosphorous tribromide

Answer: A

Watch Video Solution

234. Reaction of phenol with chloroform in presence of dilute sodium hydroxide finally introduces which one of the following functional group

A. $-CH_2Cl$

B. $-COOH$

C. $-CHCl_2$

D. $-CHO$

Answer: B

Watch Video Solution

235. Which of the following reagents would distinguish ciscyclopenta 1,2-diol from the trans-isomer

A. Acetone

B. Ozone

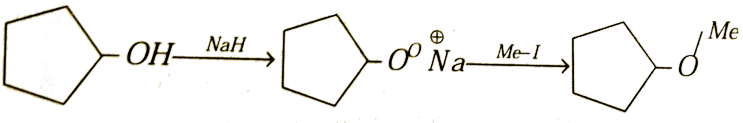
C. MnO_2

D. Aluminium isopropxide

Answer: B

Watch Video Solution

236. The reaction



can be classified as

A. Williamson ehter synthesis reaction

B. Alcohol formation reaction

C. Dehydration reaction

D. Williamson alcohol synthesis reaction

Answer: D

Watch Video Solution

237. Because of resonance the oxygen atom of -OH group of phenol

A. Acquires positive charge

B. Acquires negative charge

C. Remains uneffected

D. Liberates

Answer: C

Watch Video Solution

238. Read the following statements carefully

(A) A secondary alcohol on oxidation gives a ketone

(B) Ethanol reacts with conc. H_2SO_4 at $180^\circ C$ to yield ethylene

(C) Methanol reacts with iodine and sodium hydroxide to given a yellow precipitate of iodoform

(D) Hydrogen gas is liberated when sodium is added to alcohol. Select the correct statements from the above set

A. A,B

B. C,D

C. A,B,D

D. A,C,D

Answer: C

Watch Video Solution

239. Alcohols (i) $CH_3CH_2CH_2OH$, $(ii)CH_3-CHOH-CH_3$ and $(iii)CH_3-C(CH_3)(OH)-CH_3$ were treated with Lucas reagent (Conc. $HCl+ZnCl_2$). What results do you expect at room temperature

A. (ii) and (iii) react immediately and (i) in about 5 minutes

B. (iii) reacts immediately, (ii) reacts in about 5 minutes and (i) not at all

C. (i) reacts immediately , (ii) reacts in about 5 minutes and (iii) not at all

D. (i) reacts in about 5 minutes, (ii) reacts in about 15 minutes and (iii) not at all

Answer: A

Watch Video Solution

240. Among the following , the compound that undergoes nitration readily is

A. Benzoic acid

B. Toluene

C. Phenol

D. Nitrobenzene

Answer: C

Watch Video Solution

241. Picric acid is (at 25° C)

A. A white solid

B. A colourless liquid

C. A gas

D. A bright yellow solid

Answer: C

Watch Video Solution

242. By distilling glycol with fuming sulphuric acid, which of following is obtained

A. Glycerol

B. Pinacol

C. Dioxan

D. Ethylene oxide

Answer: C

Watch Video Solution

243. Which of the following gives negative iodoform test

A. CH_3CH_2OH

B. $CH_3CH_2CH_2OH$

C. $C_6H_5 - \underset{\underset{OH}{|}}{C}H - CH_3$

D. $CH_3 - \underset{\underset{OH}{|}}{C}H - CH_3$

Answer: B

Watch Video Solution

244. When rectified spirit and benzene are distilled togther, the first fraction obtained is

A. A ternary azeotrope

B. Absolute alcohol

C. A binary azeotrope

D. Denatured spirit

Answer: A

Watch Video Solution

245. Action of diazomethane on phenol liberates

A. O_2

B. H_2

C. N_2

D. CO_2

Answer: C

Watch Video Solution

246. Etherates are

A. Ether

B. Solution

C. Complexes of ethers with Lewis acid

D. Complexes of ether s with base

Answer: C

Watch Video Solution

247. Assertion : Phenol undergoes Kolbe's reaction whereas ethanol does not .

Reason : Phenoxide ion is more basic than ethoxide ion .

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

248. Asserion: Lucas reagent is a micture of anhydrous $ZnCI_2$ and concentrate HCI.

Reaon: Primary alcohol produces ppt. with Lucas reagents.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

249. Statement I: A triester of glycerol with stearic acid on boiling with Aq . $NaOH$ gives solid cake with soapy touch.

Statement II: Free glycerol is liberated which is a syrupy reactions.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

250. Statement-1 Resorcinol turns $FeCI_3$ solution purple

Statement - 2 Resorcinol is a dihydric phenol

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: A

Watch Video Solution

251. Assertion : Phenol is a weak acid than ethanol.

Reason : Groups with + M effect and -I effect decrease acidity at p-

position.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: D

Watch Video Solution

252. Assertion : The major product formed by heating $C_6H_5CH_2OCH_3$ with HI are $C_6H_5CH_2I$ and CH_3OH.

Reason : Benzyl cation is more stale than methyl cation.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: A

Watch Video Solution

253. Assertion: The pK_a of acetic acid is lower than that of phenol.

Reason : Phenoxide ion is more resonance sabilised.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

254. Assertion : Rate of hydrolysis of methyl chloride to methanol is higher in DMF than in water.

Reason : Hydrolysis of methyl chloride follows second order kinetics.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

255. Assertion. t-Butyl Methyl ether is not prepared by the reaction of $t-$ butyl bromide with sodium methoxide.

Reason: Sodium methoxide is a strong nucleophile.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: B

Watch Video Solution

256. Assertion: Alcohols have higher boiling points than ethers of comparable molecular masses.

Reason: Alcohols and ethers are isomerism in nature.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

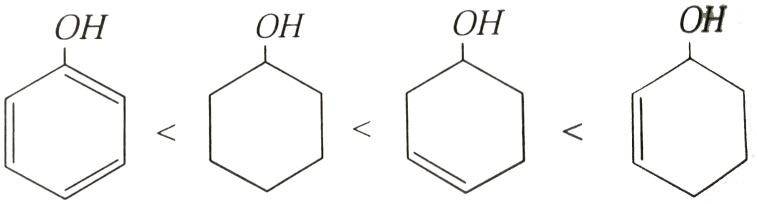
C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: B

Watch Video Solution

257. Assertion : The ease of dehydration of the following alcohols is



Reason : Alcohols leading to conjugated alkenes are dehydrated to a greater extent.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

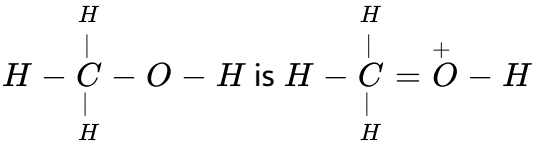
C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: A

Watch Video Solution

258. Assertion : The resonance structure of



Reason : Methanol cannot be represent by a resonance structure since the carbon atom has five bonds.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: D

Watch Video Solution

259. Assertion :Etherates are coordinates complexes of ethers with Lewis acids.

Reason : Ethers are easily cleaved by mineral acids such as HCl and H_2SO_4 at 373 K.

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: C

Watch Video Solution

260. Assertion : $(CH_3)_3C - Br$ and CH_3CH_2ONa react to form $(CH_3)_3C - O - CH_2CH_3$

Reason : Good yields of ethers are obtained when tertalkyl halides are treated with alkoxides .

A. if both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false

D. If the assertion and reason both are false

Answer: D

Watch Video Solution

Ordinary thinking (Ojective questions) Uses of Alcohol, Phenol and Ethers

1. Which of the following compounds can be used as antifreeze in automobile radiators?

A. Methyl alcohol

B. Glycol

C. Nitrophenol

D. Ethyl alcohol

Answer: B

Watch Video Solution

2. Wine (alcoholic beverages) contains

A. CH_3OH

B. Glycerol

C. C_2H_5OH

D. 2-propanol

Answer: C

Watch Video Solution

3. Washing soap can be prepared by saponification with alkali of the oil

A. Rose oil

B. Paraffin oil

C. Groundnut oil

D. Kerosene

Answer: C

Watch Video Solution

4. Alcoholic fermentation is brought about by the action of

A. CO_2

B. O_2

C. Invertase

D. Yeast

Answer: D

Watch Video Solution

5. Widesptreal deaths due to liquor poisoning occurs due to oresence of

A. Presence of carbonic acid in liquor

B. Presence of ethyl alcohol in liquor

C. Presence of methyl alcohol in liquor

D. Presence of lead compounds in liquor

Answer: C

Watch Video Solution

6. In presence of air , fermentation of ethyl alcohol by azotobactor bacteria forms

A. $CH_2 = CH_2$

B. C_2H_6

C. CH_3CHO

D. CH_3COOH

Answer: D

Watch Video Solution

7. Glycerol as a triester is present in

A. Petroleum

B. Kerosene

C. Vegetable oil and fat

D. Naphtha

Answer: C

Watch Video Solution

8. Tonics in general contain

A. Ether

B. Methanol

C. Ethanol

D. Rectified spirit

Answer: C

Watch Video Solution

9. The Bouveault-Blanc reduction involves

A. C_2H_5OH / Na

B. $LiAlH_4$

C. $C_2H_5MgX^-$

D. Zn/HCl

Answer: A

Watch Video Solution

10. Main constituent of dynamite is

A. Nitrobenzene

B. Nitroglycerine

C. Picric acid

D. TNT

Answer: B

Watch Video Solution

11. Denatured spirit is mainly used as a :

A. Good fuel

B. Drug

C. Solvent in preparing varnishes

D. Material in the preparation of oil

Answer: C

Watch Video Solution

12. Methyl alcohol is toxic. The reason assigned is

A. It stops respiratory track

B. It reacts with nitrogen and forms CN^- in the lungs

C. It increase CO_2 content in the blood

D. It is reduction product of formaldehyde

Answer: B

Watch Video Solution

13. Glycerol is used _____.

A. As a sweetening agent

B. In the manufacture of good quality soap

C. In the manufacture of nitro glycerine

D. In all of these

Answer: D

Watch Video Solution

14. Diethyl ether finds use in medicine as

A. A pain killer

B. A hypnotic

C. An antisptic

D. AN anaesthetic

Answer: D

Watch Video Solution

15. Power alocohol is a mixture of :

A. 80 % petrol + 20% benzene + small quantity of ethanol

B. 80% petrol + 20% ethanol + small quantity of benzene

C. 80% ethanol + 20% benzene + small quantity of petrol

D. 50% petrol + 50% ethanol + small quantity of benzene

Answer: B

Watch Video Solution

16. 4-chloro-3, 5-dimethyl phenol is called

A. Chloramphenicol

B. Paracetamol

C. Barbital

D. Dettol

Answer: D

Watch Video Solution

17. Glycerol is used in the manufacture of:

A. Dynamite

B. Varnish

C. Paints

D. Soft drinks

Answer: A

Watch Video Solution

18. When glycol is heated with dicarboxylic acid, the products are:

A. Polyesters

B. Polyethers

C. Polyethylene

D. No reaction at all

Answer: A

Watch Video Solution

19. Glycerol is not used in which of following cases

A. Explosive making

B. Shaving soap making

C. As an antifreeze for water

D. As an antiseptic agent

Answer: D

Watch Video Solution

20. In order to make alcohol undrinkable pyridine and methanol are added to it. The resulting alcohol is called:

A. Power alcohol

B. Proof spirit

C. Denatured spirit

D. Poison alcohol

Answer: C

Watch Video Solution

Critical Thinking (Objective Questions)

1. The most suitable method of separation of a 1:1 mixture of o- and p-nitrophenol is-

A. Distillation

B. Sublimation

C. Crystallization

D. Chromatography

Answer: A

Watch Video Solution

2. Which of the following statement is correct regarding case of dehydration in alcohols

A. Primary $>$ Secondary

B. Secondary $>$ Tertiary

C. Tertiary $>$ Primary

D. None of these

Answer: C

Watch Video Solution

3. Glycerol boils at 290° C slight decomposition Impure glycerine can be purified by

A. Steam distillation

B. Simple distillation

C. Vacuum distillation

D. Extraction with a solvent

Answer: C

Watch Video Solution

4. Ethylene reacts with Baeyer's reagent to given

A. Ethane

B. Ethyl alcohol

C. Ethyl glycol

D. None of these

Answer: C

Watch Video Solution

5. The correct order of boiling point for primary (1°). Secondary (2°) and tertiary (3°) alcohol is

A. $1^\circ > 2^\circ > 3^\circ$

B. $3^\circ > 2^\circ > 1^\circ$

C. $2^\circ > 1^\circ > 3^\circ$

D. $2^\circ > 3^\circ > 1^\circ$

Answer: A

Watch Video Solution

6. Which of the following does not form phenol or phenoxide ion ?

A. C_6H_5Cl

B. C_6H_5COOH

C. $C_6H_5N_2Cl$

D. $C_6H_5SO_3Na$

Answer: B

Watch Video Solution

7. When alcohol reacts with conc. H_2SO_4, intermediate compound formed is :

A. Carbonium ion

B. Alkoxy ion

C. Alkyl hydrogen sulphate

D. None of these

Answer: A

Watch Video Solution

8. Which of the following will be obtained by keeping ether in contact with air for a long time ?

A. $C_2H_5 - O - CH(CH_3) - O - OH$

B. $C_2H_5 - O - C_2H_5OH$

C. $C_2H_5 - O - C_2H_5OH$

D. $CH_3 - OCH(CH_3) - O - OH$

Answer: A

Watch Video Solution

9. The best reagent to convert pent-3-en-2-ol into pent-3-en-2-one is

A. Acidic permanganate

B. Acidic dichromate

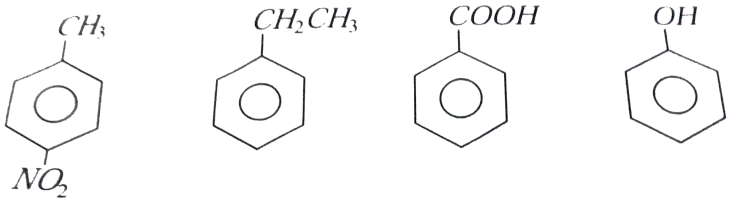
C. Chromic anhydride in glacial acid

D. Pyridinium chloro -chromate

Answer: C

Watch Video Solution

10. Which will undergo a Friedel-Craft's alkylation reaction



A. 1,2 and 4

B. 1 and 3

C. 2 and 4

D. 1 and 2

Answer: C

Watch Video Solution

11. $(CH_3)_3C - OH$ on treatment with NaCl in aqueous medium gives

A. No reaction

B. $(CH_3)_3C^- Na^+$

C. $(CH_3)_3C^-Cl^-$

D. Isobutylene

Answer: A

Watch Video Solution

12. Which of the following compounds on boiling with alkaline $KMnO_4$ and subsequent acidification will not give benzoic aicd ?

A. Benzyl alcohol

B. Acetophenone

C. Anisole

D. Toluence

Answer: C

Watch Video Solution

13. Phenol $\xrightarrow{NaNO_2 / H_2SO_4} B \xrightarrow{H_2O} C \xrightarrow{NaOH} D$

Name of the above reaction is

A. Liebermann reaction

B. Phthalein fusion test

C. Reimer-Tiemann reaction

D. Schotten-Baumann reaction

Answer: A

Watch Video Solution

14. An organic compound X is oxidised by using acidified $K_2Cr_2O_7$. The product obtained reacts with phenyl hydrazine but does not answer silver mirror test . The sturcture of X is

A. CH_3COCH_3

B. $(CH_3)_2CHOH$

C. CH_3CHO

D. CH_3CH_2OH

Answer: B

View Text Solution

15. Correct statement (s) in cases of n-butanol and t-butanol is (are) :

A. Both are having equal solubility in water

B. t-butanol is more soluble in water than n-butanol

C. boiling point of f-butanol is lower than n-butanol

D. Boiling point of n-butanol is lower than t-butanol

Answer: B::C

Watch Video Solution

16. Decreasing order of reactivity in Williamson synthesis orf the following

.

Me_3CCH_2Br

$CH_3CH_2CH_2Br$

$CH_2 = CHCH_2CI$

$CH_3CH_2CH_2CI$.

A. $III > II > IV > I$

B. $I > II > IV > III$

C. $III > II > IV > I$

D. $I > III > II > IV$

Answer: C

Watch Video Solution

17. When a mixture of ethanol and methanol is heated in the presence of concentreated H_2SO_4, the resulting organic product/ products is/ are

A. $CH_3OC_2H_5$

B. CH_3OCH_3 and $C_2H_5OC_2H_5$

C. $CH_3OC_2H_5$ and CH_3OCH_3

D. $CH_3OC_2H_5, CH_3OCH_3$ and $C_2H_5OC_2H_5$

Answer: D

Watch Video Solution

JEE SECTION (Only One Choice Correct Answer)

1. Which compound is soluble in water

A. CS_2

B. C_2H_5OH

C. CCl_4

D. $CHCl_3$

Answer: B

Watch Video Solution

2. The alcohol that produces turbidity immediately with $ZnCl_2$/conc. HCl at room temperature

A. 1-hydroxybutane

B. 2-hydroxybutane

C. 2-hydroxy-2-methylpropane

D. 1-hydroxy-2-methylpropane

Answer: C

Watch Video Solution

3. The compound which is not isomeric with diethyl ether is :

A. n-prophylmethyl ether

B. Butane-1-ol

C. 2-methylpropane-2-ol

D. Butanone

Answer: D

Watch Video Solution

4. Conc. H_2SO_4 reacts with C_2H_5OH at 170° C to form

A. CH_3COCH_3

B. CH_3COOH

C. CH_3CHO

D. C_2H_4

Answer: D

Watch Video Solution

5. At low temperature phenol reacts wity Br_2 in CS_2 to form

A. m-bromophenol

B. o-and p-bromophenol

C. p-bromophenol

D. 2,4,6-tribromophenol

Answer: B

Watch Video Solution

6. Commercially methanol is prepared by

A. Reduction of CO in presence of $ZnO.\ Cr_2O_3$

B. Methane reacts with water vapours at $900^\circ C$ in presence of Ni catalyst

C. Reduction of HCHO by $LiAlH_4$

D. Reduction of HCHO by aqueous NaOH

Answer: A

Watch Video Solution

7. Carbylamine test is performed in alc . KOH by heating a mixture of :

A. Chloroform and silver powder

B. Trihalogen methane and primary amine

C. Alkyl halide and priamry amine

D. Alkyl cyanide and priamry amine

Answer: B

Watch Video Solution

8. Amongst the following , HBr reacts fastest with _____.

A. Propane-1-ol

B. Propane-2-ol

C. 2-methyl propane-1-ol

D. 2-methyl propane-2-ol

Answer: D

Watch Video Solution

9. Hydrogen bonding is maximum in:

A. Ethanol

B. Diethyl ether

C. Ethyl chloride

D. Triethyl amine

Answer: A

Watch Video Solution

10. In CH_3CH_2OH, the bond that undergoes heterolytic cleavage most readily is

A. C-C

B. C-O

C. C-H

D. O-H

Answer: D

Watch Video Solution

11. Statement-I : Solubility on n-alcohols in water decreases with increase in molecular weight

Because

Statement-II: The relative proportion of the hydrocarbon part in alcohols increases with increasing molecular weight which permits enhanced hydrogen bond with water.

A. Both (S) and (E) are correct and (E) is not the correct explanation of (S)

B. Both (S) and(E) are correct but (E) is not the correct explanation of (S)

C. (S) is correct but (E) is wrong

D. (S) is wrong but (E) is correct

Answer: C

 Watch Video Solution

12. Assertion: p-nitrophenol is a stronger acid than o-nitrophenol.

Reason: Intramolecular hydrogen bonding makes the o-isomer weaker

than the $p-$ isomer.

A. Both assertion and statement are true and statement is the correct

B. Assertion is correct and statement is wrong, statement is not the correct explanation of assertion

C. Assertion is wrong and statement is correct, statement is not the correct explanation of assertion

D. Both assertion and statement are wrong and statement is not the correct explanation of assertion

Answer: A

Watch Video Solution

13. Chlorination of toluene in the presence of light and heat followed by treatment with aqueous $NaOH$ gives

A. o-cresol

B. p-cresol

C. 2,4-dihydroxy toluene

D. Benzyl alcohol

Answer: D

Watch Video Solution

14. Which will dehydrate easily

A. 3-methyl-2-butanol

B. Ethyl alcohol

C. 2-methyl propane-2-ol

D. 2-methyl butanol-2

Answer: D

Watch Video Solution

15. The products formed in the following reaction

$C_6H_5 - O - CH_3 + HI \xrightarrow{heat}$ are

A. $C_6H_5 - I$ and $CH_3 - OH$

B. $C_6H_5 - OH$ and $CH_3 - I$

C. $C_6H_5 - CH_3$ and HOI

D. C_6H_6 and CH_3OI

Answer: B

Watch Video Solution

16. Sodium benzene sulphonate reacts with NaOH and then on acidic hydrolysis, it gives:

A. Phenol

B. Benzoic acid

C. Benzene

D. Disodium benzaldehyde

Answer: A

Watch Video Solution

17. In the following group :

$-OAc(I),\ -OMe(II),\ -OSO_2(III),\ -OSO_2CF_3(IV)$

The order of leaving group ability is :

A. $I > II > III > IV$

B. $IV > III > I > II$

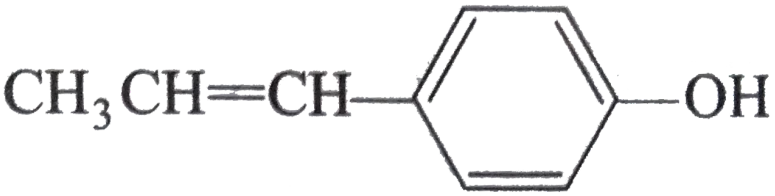
C. $III > II > I > IV$

D. $II > III > IV > I$

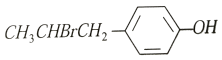
Answer: B

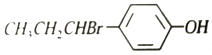
Watch Video Solution

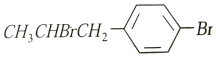
18. The reaction of

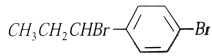


with HBr gives:

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: B

Watch Video Solution

19. Benzenediazonium chloride on reaction with aniline in weakly basic medium gives

A. Diphenyl ether

B. p-hydroxyazobenezene

C. Chlorobenzene

D. Benzene

Answer: B

Watch Video Solution

20. Among the following compounds , the strongest acid is:

A. $HC \equiv -CH$

B. C_6H_6

C. C_2H_6

D. CH_3OH

Answer: D

Watch Video Solution

21. RMgBr on reaction with an excess of oxygen followed by hydrolysis gives

A. RH

B. ROOR

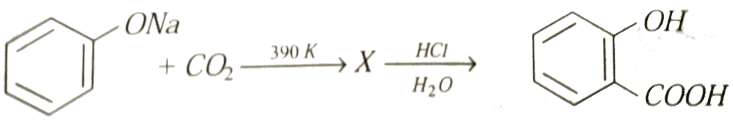
C. ROOH

D. ROH

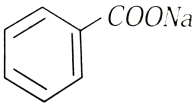
Answer: D

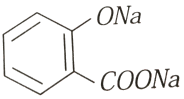
Watch Video Solution

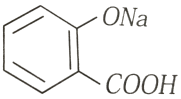
22. The compound X in the reaction

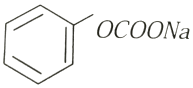


is

A. (a) 

B. (b) 

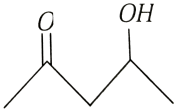
C. (c) 

D. (d) 

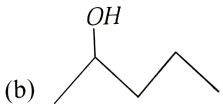
Answer: D

Watch Video Solution

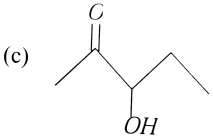
23. Which one of the following will most readily be dehydrated in acidic condition?

A. (a) 

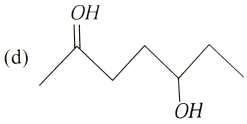
B.



C.



D.



Answer: A

Watch Video Solution

24. Statement-I: Phenol is more reactive than benzene towards electrophilic substitution reaction.

Because

Statement-II: In the case of phenol, the intermediate carbocation is more reasonance stablized.

A. Both assertion and reason are correct and reason is the correct explanation of the assertion.

B. Both assertion and reason are correct, but reason is not the correct explanation of the assertion

C. Assertion is correct , but reason is incorrect

D. Assertion is incorrect , but reason is correct

Answer: C

Watch Video Solution

25. The compound that will react most readily with $NaOH$ to from methanol is

A. $(CH_3)_4N^+I^-$

B. CH_3OCH_3

C. $(CH_3)_3S^+I^-$

D. $(CH_3)_3Cl$

Answer: A

Watch Video Solution

26. 1-propanol and 2-propanol can be best distinguished by

A. oxidation with alkaline $KMnO_4$ followed by reaction with Fehling solution

B. Oxidation with acidic dichlormate followed by reaction with Fehling solution

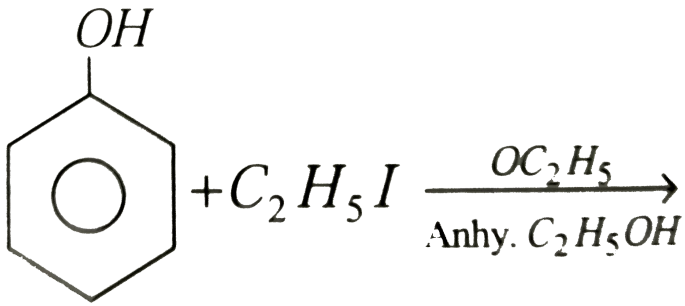
C. Oxiation by heating with copper followed by reaction with Fehling solution

D. Oxidation with concentration H_2SO_4 followed by reaction with Fehling solution

Answer: C

Watch Video Solution

27. Complete the following reaction



A. $C_6H_5OC_2H_5$

B. $C_2H_5OC_2H_5$

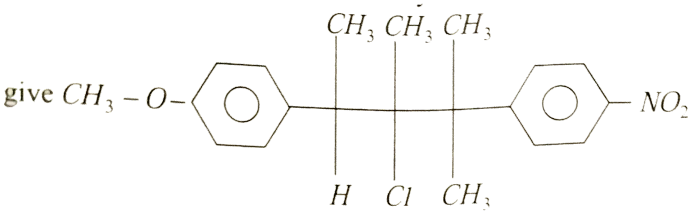
C. $C_6H_5OC_6H_5$

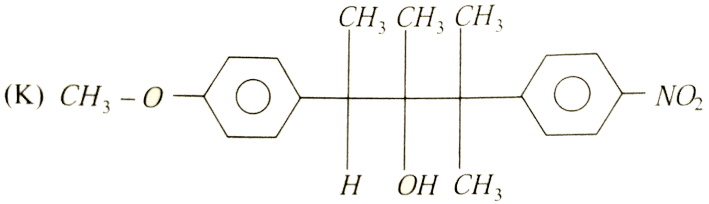
D. C_6H_5I

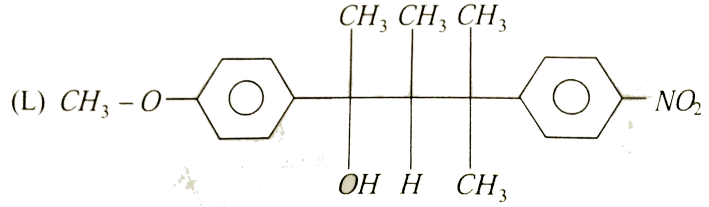
Answer: B

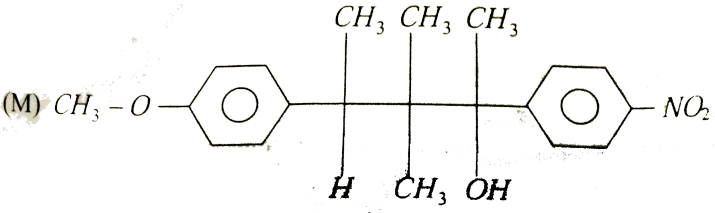
Watch Video Solution

28. The following compound on hydrolysis in aqueous acetone will

give 

(K) 

(L) 

(M) 

A. Mixture of (K) and (L)

B. Mixture of (K) and (M)

C. Only (M)

D. Only (K)

Answer: A

View Text Solution

29. When phenyl magnesium bromide reacts with t-butanol, the product would be:

A. Benzene

B. Phenol

C. t-butyl

D. t-butyl phenyl ether

Answer: A

Watch Video Solution

30. The best method to prepare cyclohexene from cyclohexanol is by using

A. Conc. HCl+$ZnCl_2$

B. Conc. H_3PO_4

C. HBr

D. Conc. HCl

Answer: B

Watch Video Solution

31. (I) 1,2-Dihydroxy benzene

(II) 1,3-Dihydroxy benzene

(III) 1,4-Dihydroxy benzene

(IV) Hydroxy benzene

The increasing order of boiling points of the above-mentioned alcohols is:

A. $I < II < III < IV$

B. $I < II < IV < III$

C. $IV < I < II < III$

D. $IV < II < I < III$

Answer: C

Watch Video Solution

32. When benzene sulfonic acid and p-nitrophenol are treated with $NaHCO_3$, the gases released respectively are

A. SO_2, NO_2

B. SO_2, NO

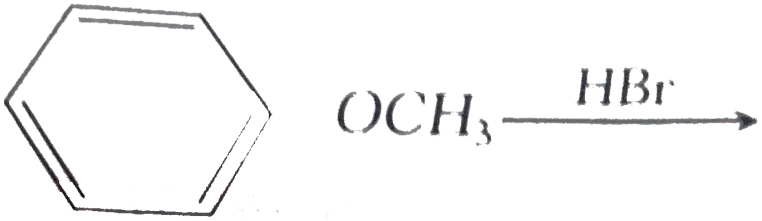
C. SO_2, CO_2

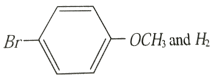
D. CO_2, CO_2

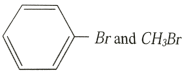
Answer: D

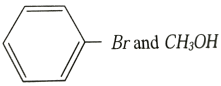
Watch Video Solution

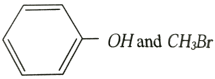
33. In the reaction



A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: D

Watch Video Solution

34. An unknown alcohol is treated with the "Lucas reagent" to determine whether the alcohol is primary, secondary or tertiary. Which alcohol reacts fastest and by what mechanism?

A. Secondary alcohol by S_N^1

B. Tertiary alcohol by S_N^1

C. Secondary alcohol by S_N^2

D. Tertiary alcohol by S_N^2

Answer: B

Watch Video Solution

35. The compound that does not liberate CO_2, on treatment with aqueous sodium bicarbonate is

A. Benzoic acid

B. Benzensulphonic acid

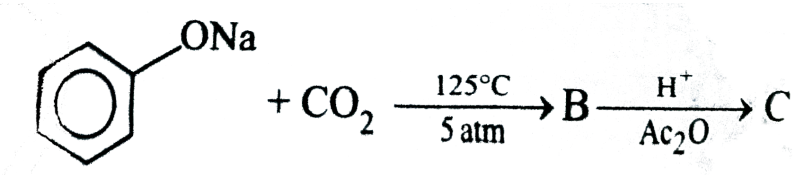
C. Salicylic acid

D. Carbolic acid (Phenol)

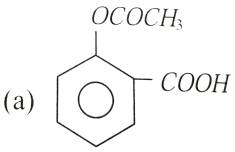
Answer: D

Watch Video Solution

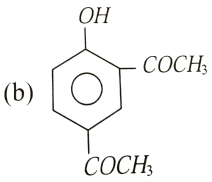
36. Sodium phenoxide when heated with CO_2 under pressure at $125^\circ C$ yield a product which on acetylation gives product C



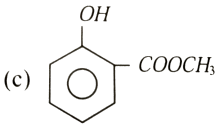
A.



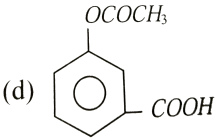
B.



C.



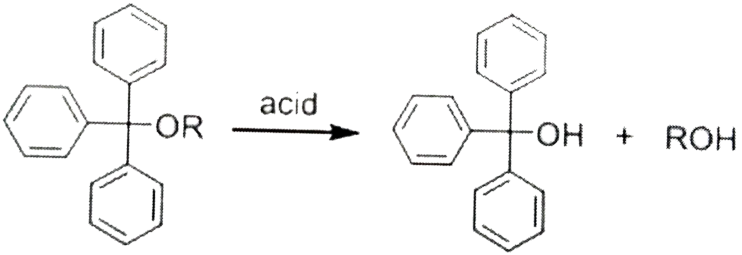
D.



Answer: A

Watch Video Solution

37. The acidic hydrolysis of ether (X) shown below is fastest when.



[X]

A. One phenyl group is replaced by a methyl group

B. One phenyl group is replaced by a para-methoxyphenyl group

C. Two phenyl groups a replaced by two paramethoxyphenyl groups

D. No structure change is made to X

Answer: C

Watch Video Solution

38. Thiol group is present in :

A. Cystine

B. Cysteine

C. Methionine

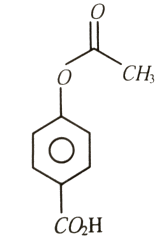
D. Cytosine

Answer: B

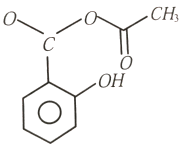
Watch Video Solution

39. Phenol on treatment with CO_2 in the presence of $NaOH$ followed by acidification produces compound X as the major product. X on treatment with $(CH_3CO)_2O$ in the presence of catalytic amount of H_2SO_4 produces

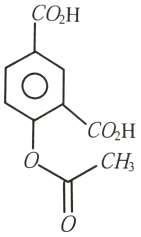
A. (a)



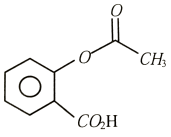
B. (b)



C. (c)



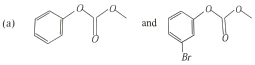
D. (d)

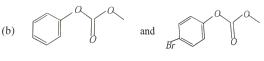


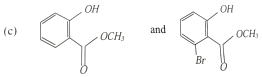
Answer: D

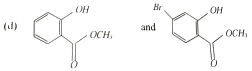
Watch Video Solution

40. Phenol reacts with methyl chloroformate in the presence of $NaOH$ to form product A. A reacts with Br_2 to form product B. A and B are respectively

A. 

B. 

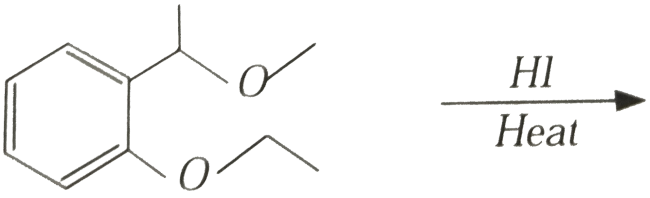
C. 

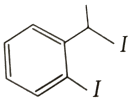
D. 

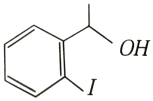
Answer: B

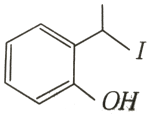
Watch Video Solution

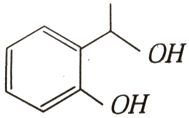
41. The major product formed in the following reactions is



A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: C

Watch Video Solution

JEE SECTION (More than One Choice Correct Answer)

1. Phenol is less acidic than

A. Acetic acid

B. p-methoxyphenol

C. o-nitrophenol

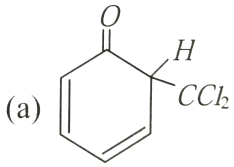
D. Ethanol

Answer: C

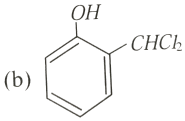
Watch Video Solution

2. When phenol is treated with $CHCl_3$ and NaOH, followed by acidification salicylaldehyde is obtained. Which of the following species are involved in the above mentioned reaction as intermediate?

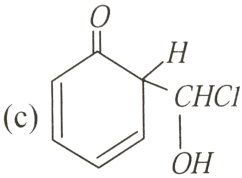
A.



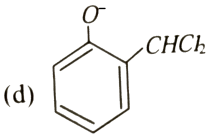
B.



C.

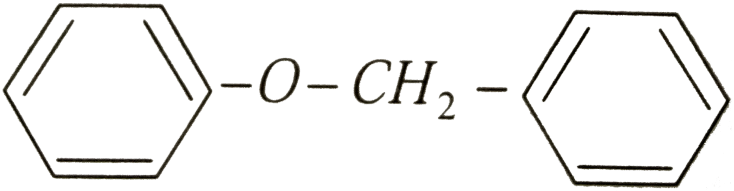


D.



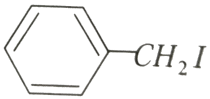
Answer: A::D

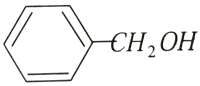
Watch Video Solution

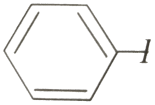


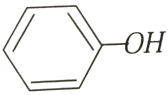
3. The when

treated with HI produces

A. (a) 

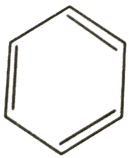
B. (b) 

C. (c) 

D. (d) 

Answer: A::D

Watch Video Solution



$$+ Cl - CH_2CH_2 - CH_3 \xrightarrow{AlCl_3}$$

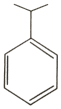
$$P \xrightarrow[(ii)\ H_3O^+]{(i)\ O_2/\Delta} Q + Phenol$$

4.

The major products P and Q are

A. (a)  and CH_3CH_2CHO

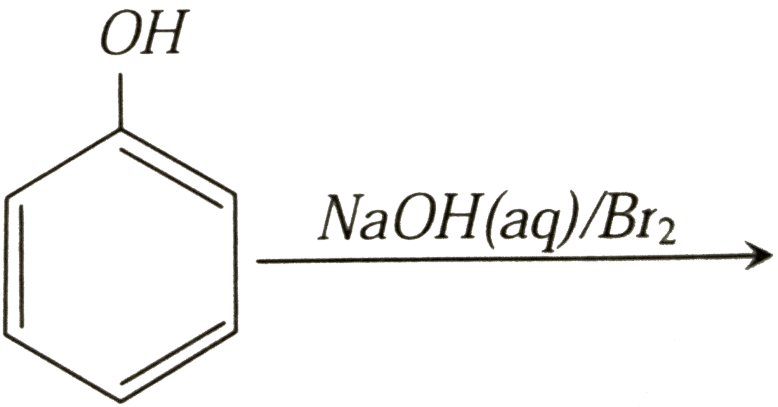
B. (b)  and CH_3COCH_3

C. (c)  and CH_3COCH_3

D. (d)  and CH_3CH_2CHO

Answer: C

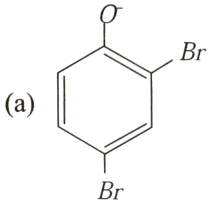
Watch Video Solution



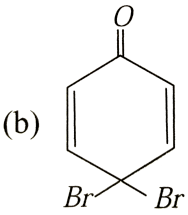
5. In the the

intermediate (s) is are

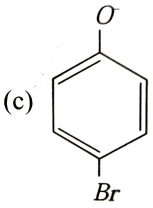
A.



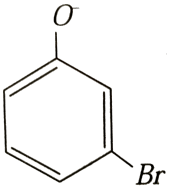
B.



C.



(d)

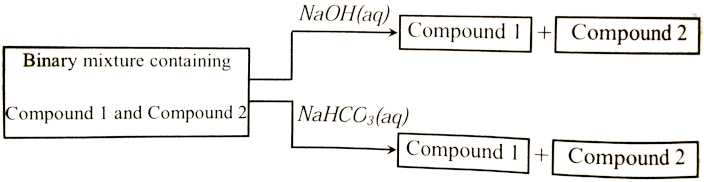


D.

Answer: A::C

Watch Video Solution

6. Identify the binary mixture(s) that can be separated into individual compounds, by differential extraction, as shown ini the given scheme



A. C_6H_5OH and C_6H_5COOH

B. C_6H_5COOH and $C_6H_5CH_2OH$

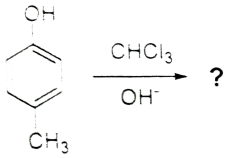
C. $C_6H_5CH_2OH$ and C_6H_5OH

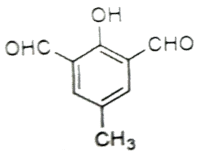
D. $C_6H_5CH_2OH$ and $C_6H_5CH_2COOH$

Answer: B::D

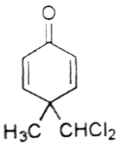
Watch Video Solution

7. In the following reaction, the product(s) formed is(are)

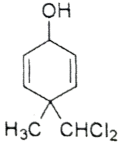




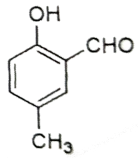
P



Q



R



S

A. P (major)

B. Q (minor)

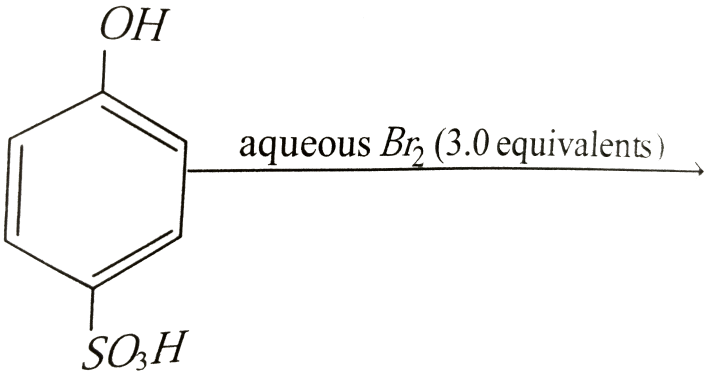
C. R (minor)

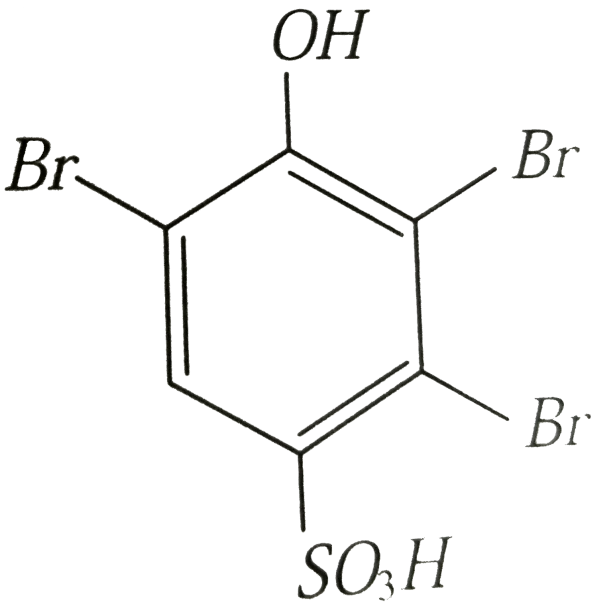
D. S (major)

Answer: B::D

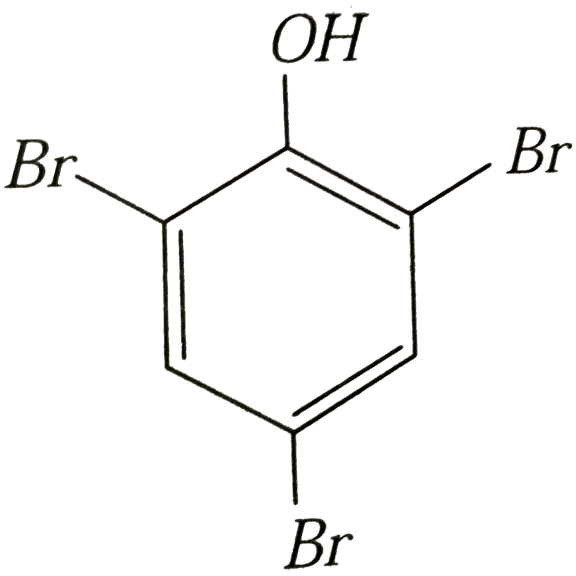
Watch Video Solution

8. The major product(s) of the following reaction is (are)

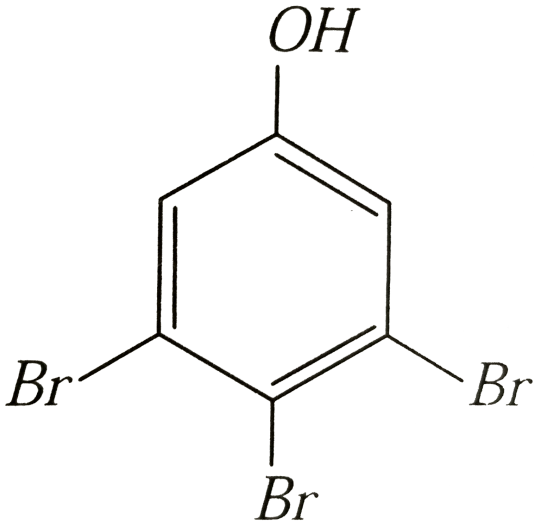




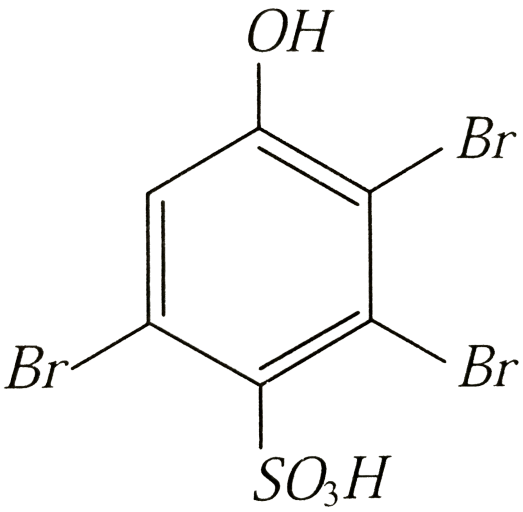
P



Q



R



S

A. P

B. Q

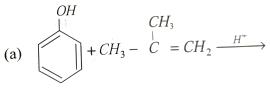
C. R

D. S

Answer: B

View Text Solution

9. Which of the following gives p-tert butyl phenol

A. 

B. Phenol + Tert butly alcohol $\xrightarrow{H^+}$

C. Phenol + Isobutyl chloride $\xrightarrow[\Delta]{AlCl_3}$

D. Phenol + Tert butyl chloride $\xrightarrow{AlCl_3}$

Answer: A::B::C::D

View Text Solution

10. Which of the following on reaction with Br_2 water will give 2,4,6-tribromo phenol

A. Phenol

B. 4-hydroxy benzene sulphonic acid

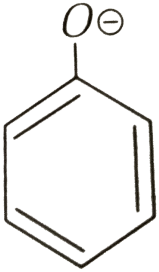
C. Salicylic acid

D. None of these

Answer: A::B::C::D

Watch Video Solution

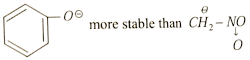
11. Phenols are more acidic than alcohols and CH_3NO_2 because

A. 

B. (b)  which is the conjugate base of phenol is more stable than $\overset{\ominus}{C}H_2 - NO_2$

C. (c)  is more stable than $CH_2 = N - O^{\ominus}$

D. In the phenoxide , the negative charge is on oxygen atom having greater unoccupied surface volume than in $\overset{\ominus}{C}H_2 - NO_2$ where the

-ve charge is on a lesser unoccupied surface volume of carbon thereby making  more stable than

Answer: A::B::D

View Text Solution

12. In phenols

A. The ortho , meta and para position all are activated

B. The ortho and para positions are activated while the meta position is deactivated

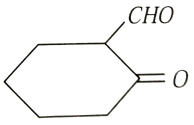
C. The ortho and para position are more activated than the meta position

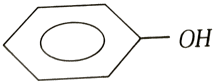
D. The ortho , meta and para position are equally acitivated

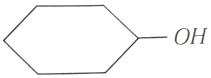
Answer: A::C

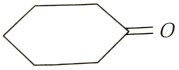
Watch Video Solution

13. Which of the following will give characteristic colour with $FeCl_3$

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: A::B

Watch Video Solution

JEE SECTION (Reasoning type questions)

1. Statement-I: Phenol is more reactive than benzene towards electrophilic substitution reaction.

Because

Statement-II: In the case of phenol, the intermediate carbocation is more reasonance stablized.

A. Statement 1 is true, statement 2 is true, statement 2 is a correct explanation for statement 1

B. Statement 1 is true , statement 2 is true, statement 2 is not a correct explanation for statement 1

C. Statement 1 is true, statement 2 is false

D. Statement 1 is true, statement 2 is true

Answer: A

 Watch Video Solution

2. Assertion: Anisole undergoes eletctrophilic substitution at $o-$ and $p-$ positions.

Reason: Anisole is less reactive than phenol towards electrohphilic substitution reactions.

A. Statement 1 is true, statement 2 is true, statement 2 is a correct explanation for statement 2

B. Statement 1 is true , statement 2 is true, statement 2 is not a correct explanation for statement 2

C. Statement 1 is true, statement 2 is false

D. Statement 1 is true, statement 2 is true

Answer: B

Watch Video Solution

3. (A) Ethyl chloride is more reactive than vinyl chloride towards nucleophilic substitution reaction .

(R) In vinyl chloride the -Cl is bonded to sp-hybridized carbon of an alkene.

A. Statement 1 is true, statement 2 is true, statement 2 is a correct explanation for statement 3

B. Statement 1 is true , statement 2 is true, statement 2 is not a correct explanation for statement 3

C. Statement 1 is true, statement 2 is false

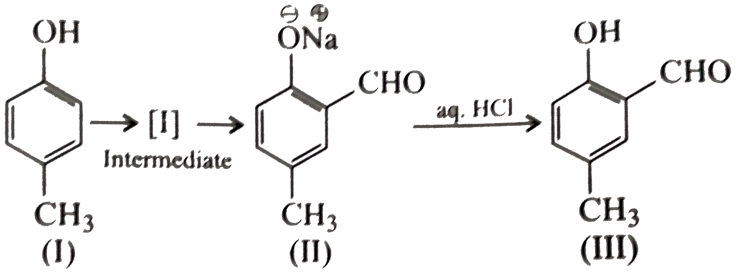
D. Statement 1 is true, statement 2 is true

Answer: C

Watch Video Solution

JEE SECTION (Comprehension type questions) Passage-I

1. Reimer-Tiemann reaction introduces an aldehyde group on to the aromatic ring of phenol, ortho to the hydroxyl group. This reacrtion involves electrophilic aromatic subsititution. It is a general method for the synthesis of subsituted salicyladehydes as depiced below:



Which one of the following reagents is used in the above reaction ?

A. Aq. $NaOH + CH_3Cl$

B. Aq. NaOH + CH_2Cl_2

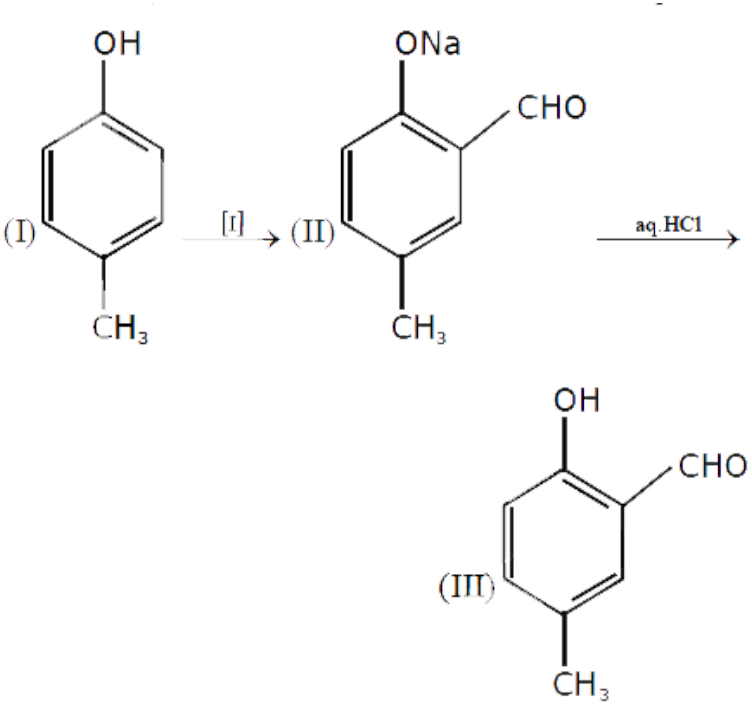
C. Aq. $NaOH + CHCl_3$

D. Aq. $NaOH + CCl_4$

Answer: C

Watch Video Solution

2. Reimer -Tiemann reaction introduces an aldehyde group on to the aromatic ring of phenol, ortho to the hydroxyl group. This reaction involves electrophilic aromatic substitution. This is a general method for the synthesis of substituted salicyladehydes as depicted below.



The electrophile in this reaction is

A. : $CHCl$

B. $^{+}CHCl_2$

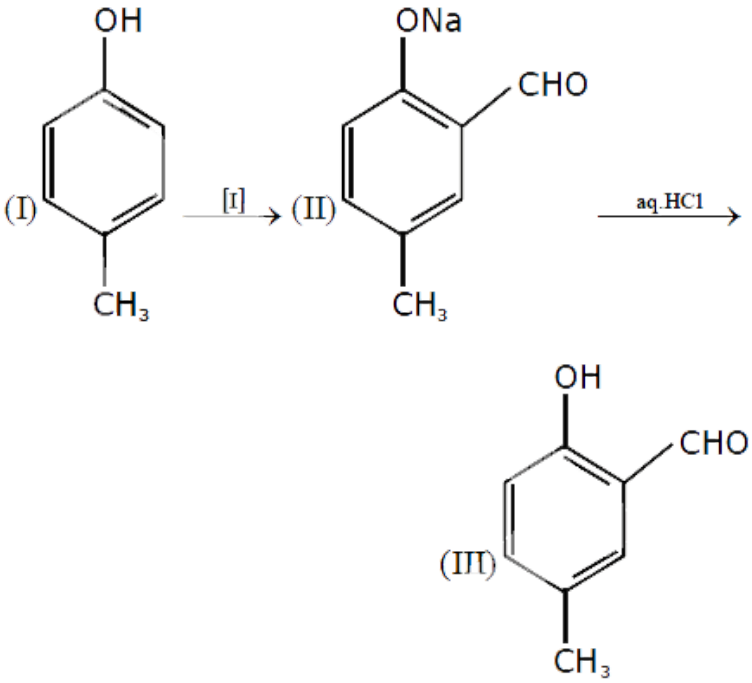
C. : CCl_2

D. $\cdot CCl_3$

Answer: C

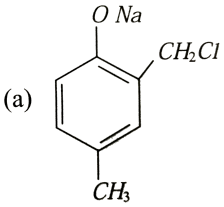
Watch Video Solution

3. Reimer -Tiemann reaction introduces an aldehyde group on to the aromatic ring of phenol, ortho to the hydroxyl group. This reaction involves electrophilic aromatic substitution. This is a general method for the synthesis of substituted salicyladehydes as depicted below.

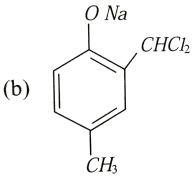


The structure of the intermediate I is

A.

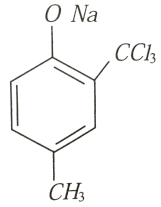


B.



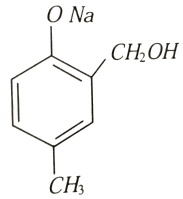
C.

(c)



D.

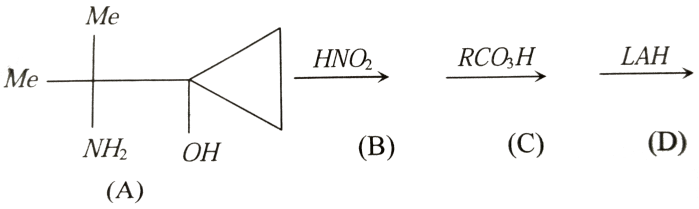
(d)



Answer: B

Watch Video Solution

JEE SECTION (Comprehension type questions) Passage-II

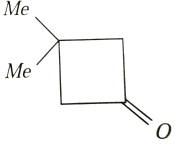


1.

The compound (B) is

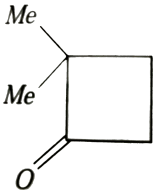
A.

(a)



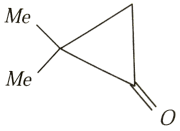
B.

(b)



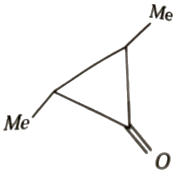
C.

(c)



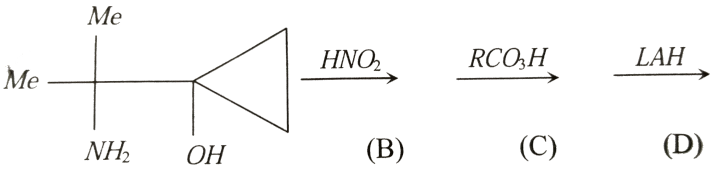
D.

(d)



Answer: B

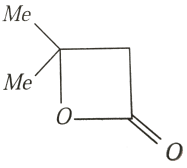
Watch Video Solution



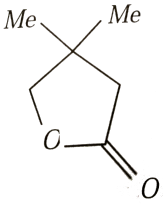
2.

The compound (C) is

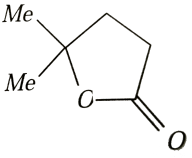
A. (a)



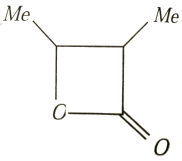
B. (b)



C. (c)



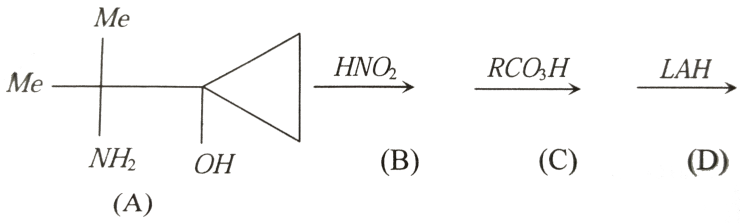
D. (d)



Answer: C

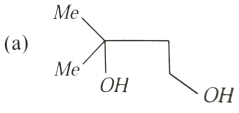
Watch Video Solution

3.

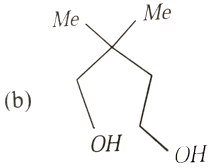


The compound (D) is

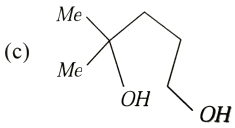
A.



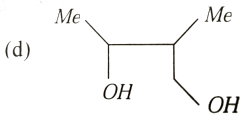
B.



C.



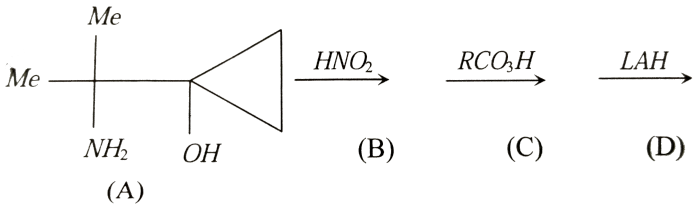
D.



Answer: C

Watch Video Solution

Watch Video Solution



4.

The reaction in the conversion of (B) and (C) is called

A. Dakin reaction

B. Baeyer-Villiger reaction

C. Pinacol-Pinacolone reaction

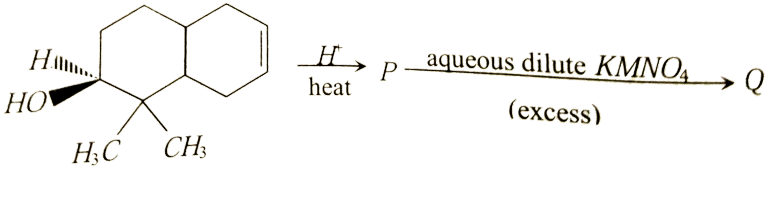
D. Oppenauer oxidation

Answer: B

Watch Video Solution

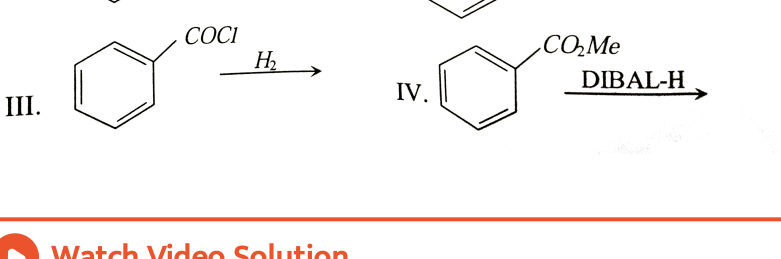
JEE SECTION (Integer type questions)

1. The number of hydroxyl group(s) in Q is



Watch Video Solution

2. Among the following the number of reaction(s) that produce(s) benzaldehyde is



Watch Video Solution

3. How many of the following ethers CANNOT be prepared by Williamson's synthesis?

$CH_3OCH_2CH_3, C_6H_5OCH_3, (C_6H_5)_2O, (CH_3)_3COCH_3, (C_2H_5)_2O, (CH$

A. 2

B. 4

C. 5

D. 6

Answer: A

Watch Video Solution

4. The number of pentyl alcohols producing blue colouration in the Victor-Meyer's test is .

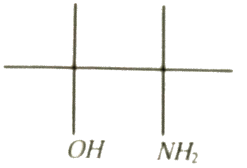
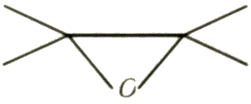
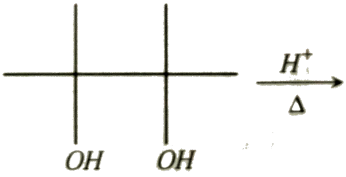
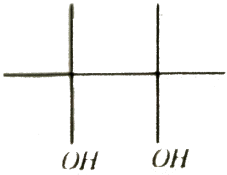
Watch Video Solution

5. How many of the structurally isomerie pentyl alcohols will give immediate turbidity in Lucas test?

Watch Video Solution

JEE SECTION (Matrix Match Type questions)

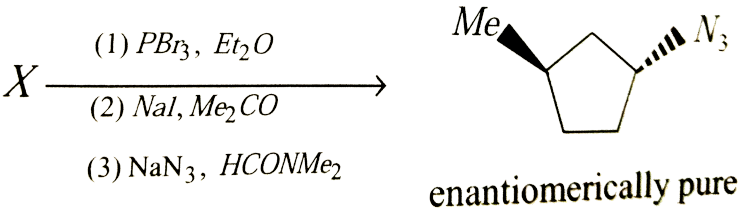
1. Match the reaction listed in Column I with their name of reaction listed in Column II

Column I Reaction		Column II Name of Reaction
(A) 	(p)	Pinacol-Pinacolone rearrangement
(B) 	(q)	Semi-Pinacol reaction
(C) 	(r)	Pinacol fashion reaction
(D) 	(s)	Pinacolic-Diazotization

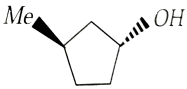
View Text Solution

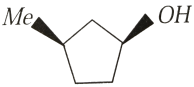
JEE SECTION (JEE Advanced 2018) More than one choice correct answer

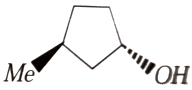
1. In the following reaction sequence, the correct structure(s) of X is (are)



enantiomerically pure

A. (a) 

B. (b) 

C. (c) 

D. (d) 

Answer: B

Watch Video Solution