doubtnut
India's Number 1 Education App

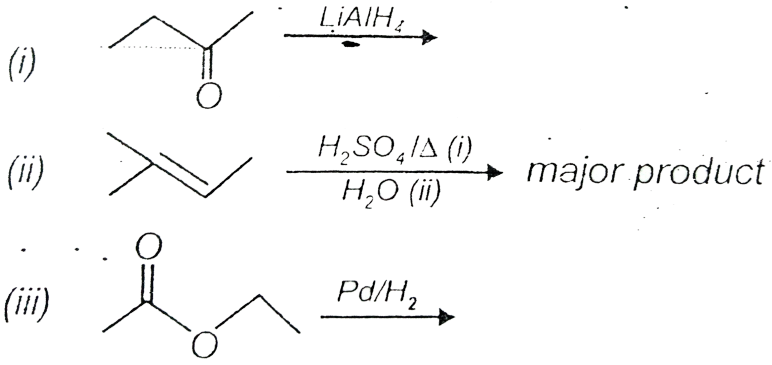
CHEMISTRY

AAKASH INSTITUTE ENGLISH

ALCOHOLS, PHENOLS AND ETHERS

Example

1. Give IUPAC name of the expected pruduct in the following reactions



Watch Video Solution

Watch Video Solution

2. Calculate the frequency and wave number of radiation with wavelength 480 nm.

Watch Video Solution

3. Arrange the following in decreasing order of acidic nature of

(a) (i) F_3CCH_2OH , (ii) $(CH_3)_3CCH_2OH$, (iii) $FCH_2CH_2C_2OH$

(b)

Watch Video Solution

4. a : When 3° alkyl halide is used in Williamson 's synthesis what will be the major product and why ?

b : When 3° alkoxide is used in Williamson's synthesis what will be the major product and why ?

Watch Video Solution

5. Find the pH of a 0.002N acetic acid solution if it is 2.3% ionised at a given dilution.

Watch Video Solution

Try Yourself

1. The pH value of decinormal solution of NH4OH, which is 20% ionised, is:

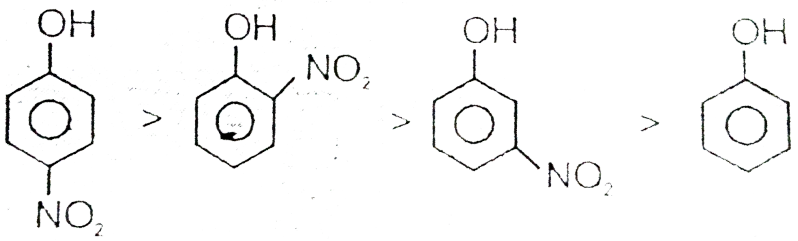
Watch Video Solution

2. The pH of 10^{-3}M $NH_4OH\left(K_b = 10^{-5}\right)$ is:

Watch Video Solution

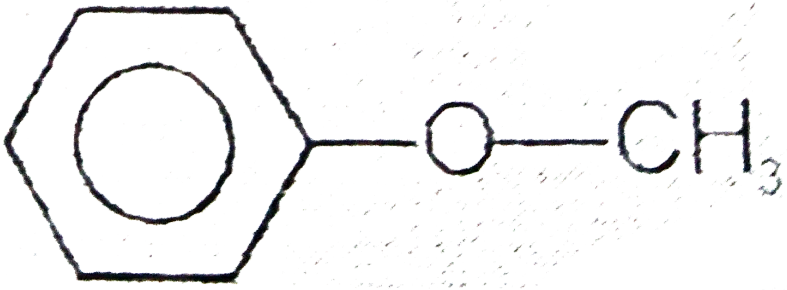
3. (a) Why acidic nature of alcohol and phenol increase with electron withdrawing substituent

(b) Explain the order of acidic nature of

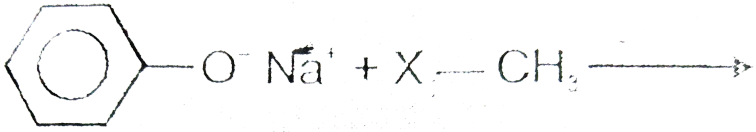


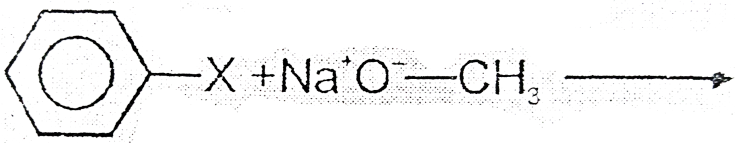
Watch Video Solution

4. For the preparation of anisole



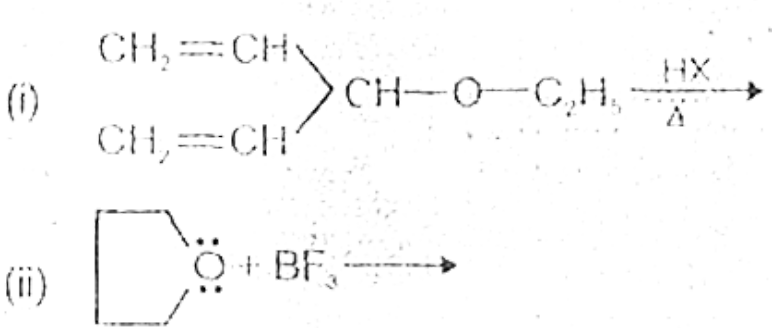
which one is preferable reaction and why ?





Watch Video Solution

5. Predict final products in the reactions



Watch Video Solution

Exercise

1. Ketones can be converted to tertiary alcohols by

A. Reduction

B. Oxidation

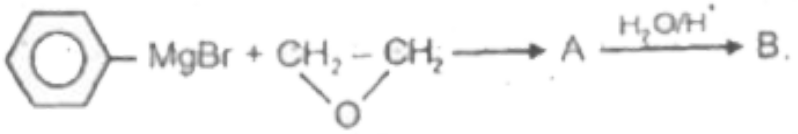
C. Reaction with Grignard reagent

D. All of these

Answer: C

Watch Video Solution

2. In the sequence of reactions , . The product B is



A. Benzyl alcohol

B. 2-phenyl ethanol

C. 1-phenyl ethanol

D. Quinol

Answer: B

Watch Video Solution

3. Iso - butylene when subjected to hydroboration oxidation reaction yields

A. Sec-butyl alcohol

B. Tert-butyl alcohol

C. Iso-butyl alcohol

D. n-butyl alcohol

Answer: C

Watch Video Solution

4. Identify the final product $CH_2 = CH_2 \xrightarrow{Cl_2 / H_2O} X \xrightarrow{-aq.KOH} Y$

A. 2-chloroethanol

B. 2-chloromethanol

C. 1-chloroethanol

D. Ethylene giycol

Answer: D

Watch Video Solution

5. 3 - methyl - 1 - butene on oxymercuration - demercuration yields . . .

. . . As the major product

A. 3-methyl-2-butanol

B. 2-methyl-3-butanol

C. 3-methyl-1-butanol

D. 2-methyl-1-butanol

Answer: A

Watch Video Solution

6. What is Z in the following sequence of reactions?

$$Z \xrightarrow{PCl_3} X \xrightarrow{alc.KOH} Y \xrightarrow[(ii)\, H_2Oboil]{(i)\, Conc.\, H_2SO_4} Z$$

A. $CH_3CH_2CH_2OH$

B. $CH_3CHOHCH_3$

C. $(CH_3CH_2)_2CHOH$

D. $CH_3 - CH = CH_2$

Answer: B

Watch Video Solution

7. Which of the following is the strongest base ?

A. tert-butoxide

B. Ethoxide

C. iso-propoxide

D. Methoxide

Answer: A

Watch Video Solution

8. An alcohol on vigorous oxidation is found to give ethanoic acid and propanoic acid . The alcohol may be

A. 1-pentanol

B. 2-pentanol

C. 1-butanol

D. 2-butanol

Answer: B

Watch Video Solution

9. The order of reactivity of alcohols with sodium metal is

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

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

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

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

Answer: B

Watch Video Solution

10. Which one of the following compounds would not be easily oxidised by $K_2Cr_2O_7 \text{in dil} H_2SO_4$?

A. CH_3OH

B. $(CH_3)_3COH$

C. CH_3CH_2OH

D. CH_3CHO

Answer: B

Watch Video Solution

11. Which of the following alcohols can be most easily dehydrated?

A. C_2H_5OH

B. $CH_3 - \underset{\underset{CH_3}{|}}{CH} - OH$

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

D. $CH_3CH_2CH_2OH$

Answer: C

Watch Video Solution

12. When wine is exposed to air it becomes sour due to

A. Bactena

B. Oxidation of $C_2H_5OHtoCH_3COOH$

C. Virus

D. Formic acid formation

Answer: B

Watch Video Solution

13. Starch is converted to maltose by

A. Zymase

B. Maltase

C. Diastase

D. Invertase

Answer: C

Watch Video Solution

14. Rectified spirit is a mixture of

A. $95\,\%\,C_2H_5OH$ and $5\,\%\,H_2O$

B. $94\,\%\,C_2H_5OH$ and $6\,\%\,H_2O$

C. $95.6\,\%\,C_2H_5OH$ and $4.4\,\%\,H_2O$

D. $94.47\,\%\,C_2H_5OH$ and $5.53\,\%\,H_2O$

Answer: C

Watch Video Solution

15. Methanol and ethanol can be distinguished by

A. Lucas test

B. Iodoform test

C. Victor Meyer's test

D. All of these

Answer: B

Watch Video Solution

16. In Reimer Tiemann reaction dichlorocarbene acts as

A. Nucleophile

B. Electrophile

C. Free radical

D. All of these

Answer: B

Watch Video Solution

17. Carbolic acid is

A. Phenol

B. Phenyl benzoate

C. Phenyl acetate

D. Salot

Answer: A

Watch Video Solution

18. Which of the following is a trihydric phenol ?

A. Resorcinol

B. p - cresol

C. phloroglucinol

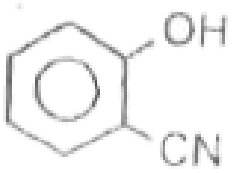
D. Catechol

Answer: C

Watch Video Solution

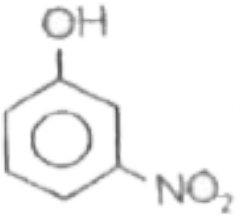
19. Which of the following is the strongest acid ?

A.



B. 

C. 

D. 

Answer: C

Watch Video Solution

20. Electrophilic subsitution reaction in phenol take place at :

A. Ortho and para positions

B. Meta - position

C. Ortho - position

D. Para - position

Answer: A

Watch Video Solution

21. The following reaction is known as :

Phenol $\xrightarrow{1.CHCl_3/NaOH}$ Salicylaldehyde

A. Gattermann aldehyde synthesis

B. Sandemeyer's reaction

C. Kolbe's reaction

D. Reimer - Tiemann reaction

Answer: D

Watch Video Solution

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

A. 4.0

B. 6.0

C. 10.22

D. 20.44

Answer: C

Watch Video Solution

23. Identify the product Z in the following sequence of reactions

$$\text{"}phenol \xrightarrow{NaOH} X \xrightarrow[4-7atm, 410K]{CO_2} Y \xrightarrow{H_3O^+} Z$$

A. Aspirin

B. Salicylaldehyde

C. Benzoic acid

D. Salicylic acid

Answer: D

Watch Video Solution

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

A. NaOH

B. $FeCl_3$

C. Br_2 / H_2O

D. Na

Answer: D

Watch Video Solution

25. The most suitable method of separation of 1:1 mixture of ortho and para-nitrophenols is :

sublimation

chromatography

crystallisation

steam distillation

A. Subimation

B. Chromatography

C. Crystallisation

D. Steam distillation

Answer: D

Watch Video Solution

26. Neutral $FeCl_3$ gives purple colour with

A. Only phenol

B. p-cresol

C. 2,4,6-tribromophenol

D. All of these

Answer: D

Watch Video Solution

27. Asqirin is obtained by the reaction of salicylic acid with

A. Acetic anhydride

B. Acetaldehyde

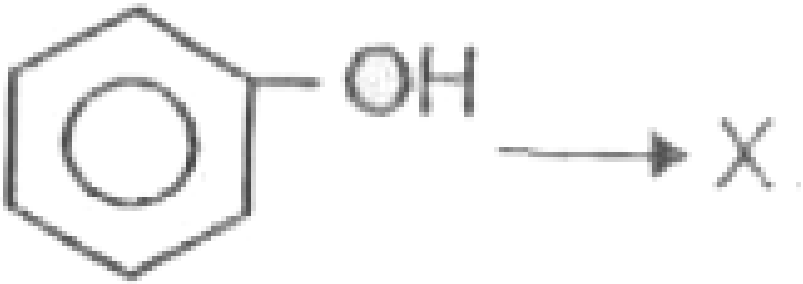
C. Acetyl chloride

D. Methanol

Answer: A

Watch Video Solution

28. Phenol on treatment with zinc powder gives X . In the above reaction X will be



A. Benzaldehyde

B. Benzene

C. Anisole

D. Phenyl acetate

Answer: B

Watch Video Solution

29. The ionization constant of a phenol is higher than that of ethanol because

A. Phenoxide ion is a stronger base than ethoxide ion

B. Phenoxide ion is stabilized through delocalisation

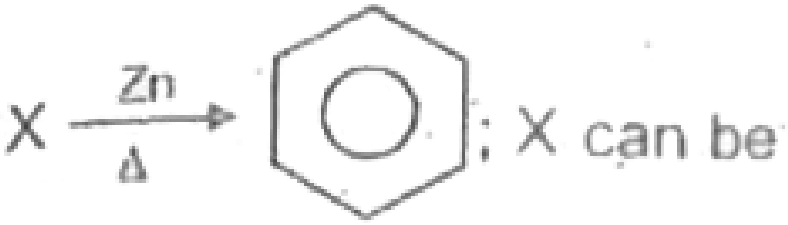
C. Phenoxide ion is less stable than ethoxide ion

D. Phenoxide ion is bulkier than ethoxide ion

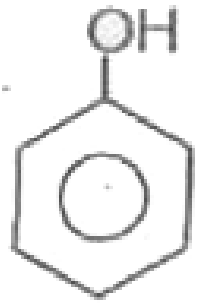
Answer: B

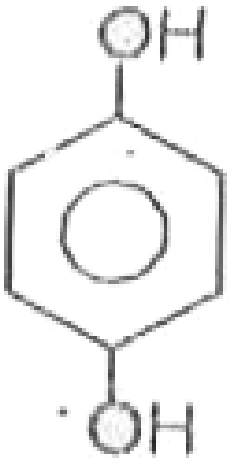
Watch Video Solution

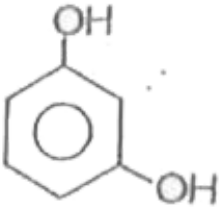
30. Can be



; X can be

A. 

B. 

C. 

D. All of these

Answer: D

Watch Video Solution

Watch Video Solution

31. The number of metamers possible for $C_4H_{10}O$ is

A. 2

B. 3

C. 4

D. 1

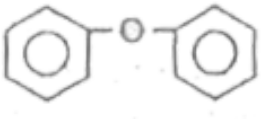
Answer: B

Watch Video Solution

32. Which of the following has maximum bond angle around oxygen ?

A. $CH_3 - O - CH_3$

B. $C_2H_5 - O - C_6H_5$

C. 

D. Same in all

Answer: C

Watch Video Solution

33. OCH_3 group is

A. Stronger + R group than - OH

B. Weaker + R group than - OH

C. Stronger + I group than - OH

D. Inert group

Answer: B

Watch Video Solution

34. $CH_3CH_2Cl + Ag_2O \xrightarrow{\Delta}$ Product . Product formed in the reaction is

A. $CH_3CH_2 - O - CH_2CH_3$

B. $CH_3CH_2Cl + AgCl$

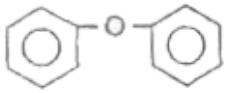
C. $CH_3CH_2 - OH + AgCl$

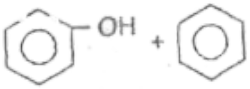
D. $(CH_3CH_2 - O)_2Ag$

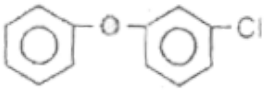
Answer: A

Watch Video Solution

35. Product of the reaction is

A. 

B. 

C. 

D. No reaction

Answer: D

Watch Video Solution

36. The ether that undergoes electrphilic substutution reaction 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

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

A. Peroxide

B. TNT

C. Oxide

D. Superoxide

Answer: A

Watch Video Solution

38. An ether is more volatile than alcohol having the same molecular formula. This is due to

A. Inter - molecular hydrogen bonding in alcohols

B. Dipolar character of ethers

C. Alcohols having resonance structure

D. Inter - molecular hydrogen bonding in ether

Answer: A

Watch Video Solution

39. Anisole with conc. HNO_3 and conc. H_2SO_4 gives

A. Phenol

B. nitrobenzene

C. o-and p-nitroanisole

D. o-nitroanisole

Answer: C

Watch Video Solution

40. Williamson's synthesis involves

A. S_N1 mechanism

B. S_N2 mechanism

C. Nucleophilic addition

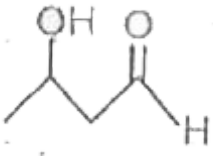
D. Electrophilic addition

Answer: B

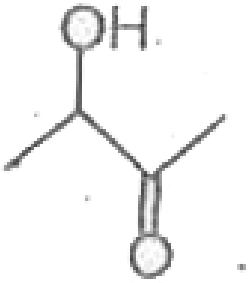
Watch Video Solution

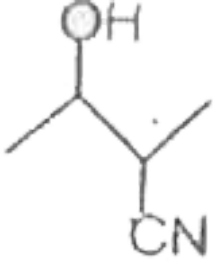
Assignment Section A Objective Type Questions

1. Which among the following is 1 alcohol ?

A. 

B. 

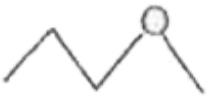
C. 

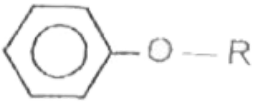
D. 

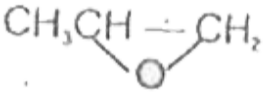
Answer: B

Watch Video Solution

2. Which one is ether ?

A. 

B. 

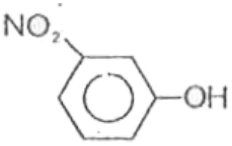
C. 

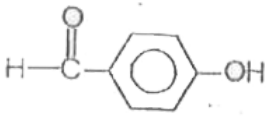
D. all of these

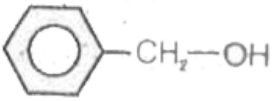
Answer: D

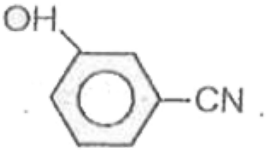
Watch Video Solution

3. Which one is phenol ?

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

4. IUPAC nae of HO $-CH_2CH_2-OH$ is

A. Ethylene glyocol

B. Ethane -1-2-diol

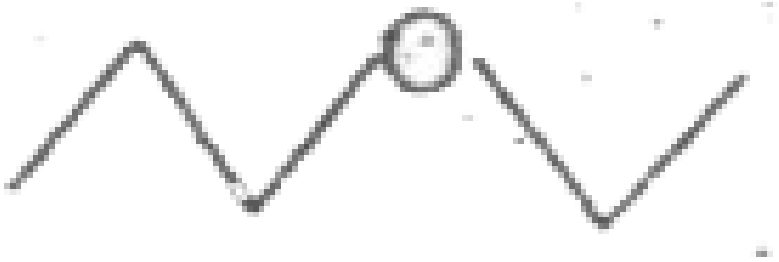
C. Ethyl -1,2-diol

D. Ethylene diol

Answer: B

Watch Video Solution

5. IUPAC name of is



A. Ethyl propyl ether

B. Propyl elhoxide

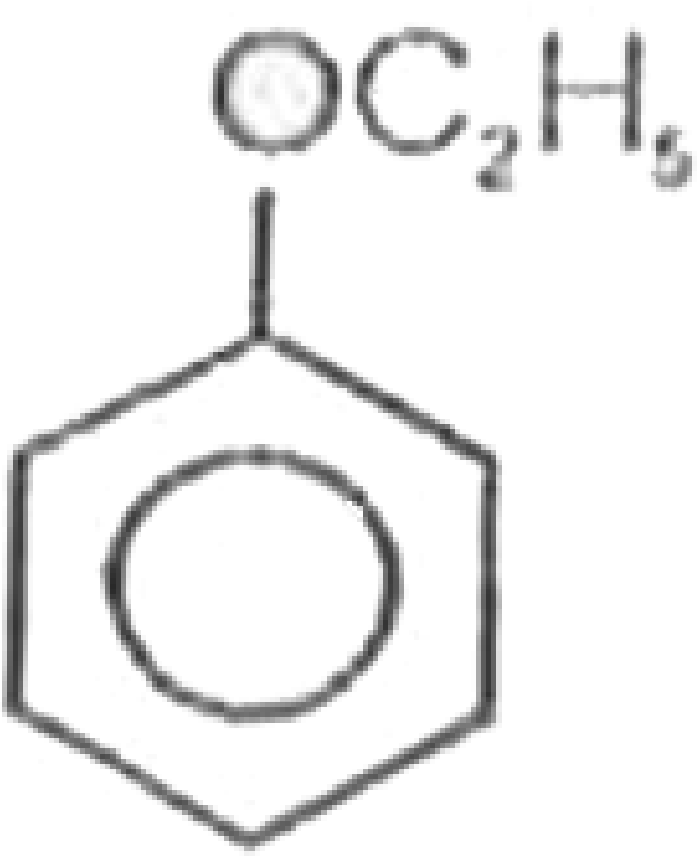
C. Ethoxy propane

D. Propoxy ethane

Answer: C

Watch Video Solution

6. IUPAC name of is



A. Benzyl ethoxide

B. Ethoxy benzyl

C. Benzene ethoxide

D. Ethoxy benzene

Answer: D

Watch Video Solution

7. Which among the following show tautomerism ?

A. Alcohols

B. Phenol

C. Ethers

D. Anisole

Answer: B

Watch Video Solution

8. Alcohols and ethers are

A. Position isomers

B. Functional isomers

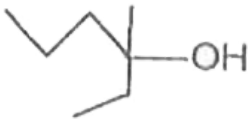
C. Chain isomers

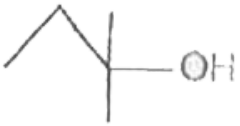
D. Metamers

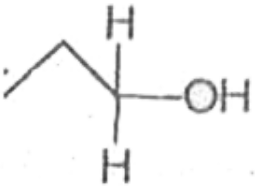
Answer: B

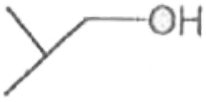
Watch Video Solution

9. Which of the following be optically active ?

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

10. How many minimum number of carbons are needed for an optically active ether ?

A. 2

B. 3

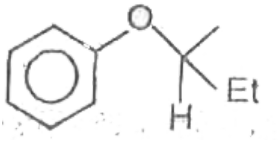
C. 4

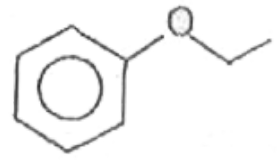
D. 5

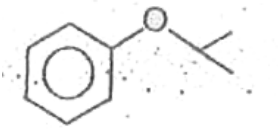
Answer: B

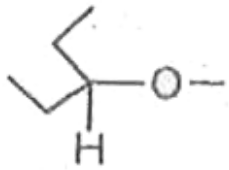
Watch Video Solution

11. Which one is optically active aromatic ether ?

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

12. 3° alkyl halides form alcohols preferably via

A. S_N2

B. S_N1

C. Transition state

D. S_Ni

Answer: B

Watch Video Solution

13. Which one is preferable reagent for given reaction ?

$RCH_2 - X \rightarrow HO - CH_2R$

A. $(H_2O + KOH)$

B. (OH+KOH)

C. $(ROH + KOH)/\Delta$

D. $(H_2O + KOH)/\Delta$

Answer: A

Watch Video Solution

14. ROH + $SOCI_2 \rightarrow$

The final product is

A. Alkyl chloride

B. Alkyl sulphate

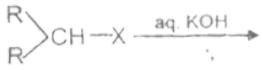
C. Alkene

D. Ether

Answer: A

Watch Video Solution

15. S_N1 is observed in

A. 

B. $R-OH+SOCl_2 \rightarrow$ a

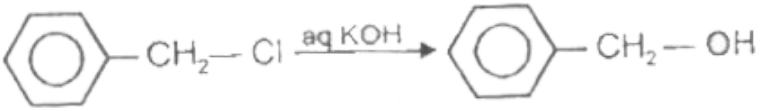
C. $R-X \xrightarrow{alc.KOH}$

D. $ROH+HX \rightarrow$

Answer: A

Watch Video Solution

16. Reaction happens via



A. S_N1

B. S_N2

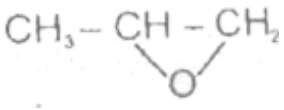
C. S_Ni

D. ArS_N1

Answer: A

Watch Video Solution

17. $CH_3CH = CH_2 \xrightarrow{H\,/\,H_2O}$ major product is

A. 

B. $CH_3\overset{\overset{OH}{|}}{C}HCH_3$

C. $CH_3CH_2CH_2OH$

D. $\underset{OH}{\overset{|}{CH_3CH}} - \underset{OH}{\overset{|}{CH_2}}$

Answer: B

Watch Video Solution

18. $RCH = CH_2 \xrightarrow[(2)\,H_2\overset{\emptyset}{Z}\,n]{(1)\,O_3} (A) \xrightarrow[LiAlH_4]{H_2O} (B)$

Product (B) is

A. RCHO +HCHO

B. RCHO + HCOOH

C. RCOOH + HCOOH

D. $RCH_2OH + CH_3OH$

Answer: D

Watch Video Solution

19. Reaction involvin anti addition is

A. $CH_2 = CH_2 \xrightarrow{H/H_2O}$

B. $CH_3CH = CH_2 \xrightarrow{HX}$

C. $CH_3CH = CH_2 \xrightarrow[NaBH_4]{Hg(OAc)_2/H_2O}$

D. $CH_2 = CH_2 \xrightarrow[H_2O_2/OH]{B_2H_6/THF}$

Answer: B

Watch Video Solution

20. Grignard reagent is most suitable for preparation of which of the following alcohol with carbonyl compound ?

A. 1° alcohols

B. 2° alcohols

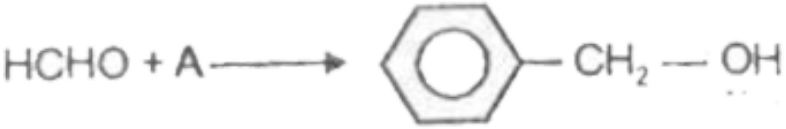
C. 3° alcohols

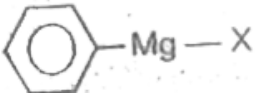
D. All of these

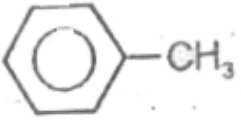
Answer: D

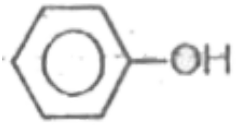
Watch Video Solution

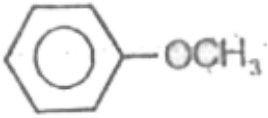
21. A is



A. 

B. 

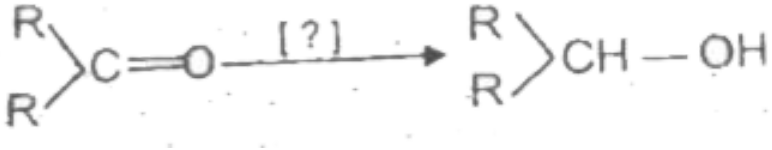
C. 

D. 

Answer: A

Watch Video Solution

22. Here reagent is



A. $LiAlH_4$

B. $NaBH_4$

C. Ni / H_2

D. All of these

Answer: D

Watch Video Solution

23. $R-\overset{\overset{O}{||}}{C}-OH \xrightarrow{[?]} RCH_2-OH$

Here reagent is

A. $LiAlH_4$

B. $NaBH_4$

C. Both (1) & (2)

D. Red P /Hl

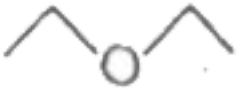
Answer: A

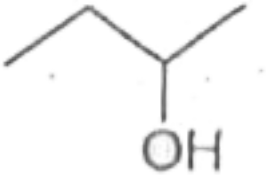
Watch Video Solution

24. Boiling point will be least for

A. 

B. 

C. 

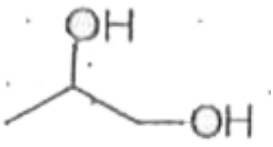
D. 

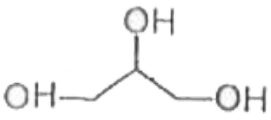
Answer: B

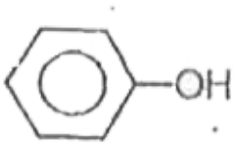
Watch Video Solution

25. Which of the most viscous ?

A. 

B. 

C. 

D. 

Answer: C

Watch Video Solution

26. Lowest boiling point is for

A. Butanol

B. Pentanol

C. 2-methyl propane - 2 - ol

D. 2-methyl butane -2-ol

Answer: C

Watch Video Solution

27. $R - OH \xrightarrow[ZnCI_3]{HX}$

A. R - X

B. Alkene

C. Both (1) & (2)

D. No product

Answer: A

Watch Video Solution

28. Order of nucleophilicity is

A. $CH_3O^- < C_2H_5O^-$

B. $C_2H_5O^- < C_2H_5S^-$

C. $CH_3O^- < CH_3S^-$

D. All of these

Answer: D

Watch Video Solution

29. 1° alcohols preferably undergo dehydration via

A. E_1

B. E_2

C. S_N1

D. S_N2

Answer: B

Watch Video Solution

30. Which of the inter- molecular dehydration ?

A. $ROH \rightarrow R - OR$

B. $ROH \rightarrow R - X$

C. $ROH \rightarrow$ alkene

D. $R - X \rightarrow ROH$

Answer: A

Watch Video Solution

31. $R-\overset{18}{O}H+R\overset{O}{\overset{||}{C}}-OH\xrightarrow{H}$

Products are

A. $R-\overset{O}{\overset{||}{C}}-\overset{18}{C}R'+H_2O$

B. $R-\overset{O}{\overset{||}{C}}-\overset{18}{O}R'+H_2^{18}O$

C. $R-\overset{O}{\overset{||}{C}}-\overset{18}{O}R+H_2^{18}O$

D. $R-\overset{O}{\overset{||}{C}}-\overset{18}{O}R+H_2O$

Answer: A

Watch Video Solution

32. Lucas test is used to distinguish

A. Phenols

B. Ethers

C. Alcohols

D. Alkyl halides

Answer: C

Watch Video Solution

33. Which of the following can give immediate turbidity on treatment with Lucas Reagent?

A. 3° alcohols

B. 2° alcohols

C. 1° alcohols

D. Phenol

Answer: A

Watch Video Solution

34. Phenols can be distinguished from alcohols by

A. $FeCl_3$ (neutral)

B. Fehling solution

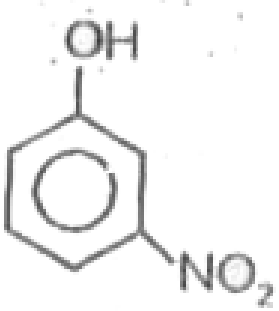
C. Tollen's reagent

D. 2,4-DNP

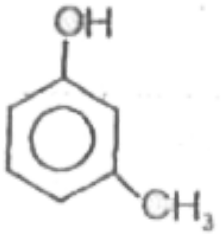
Answer: A

Watch Video Solution

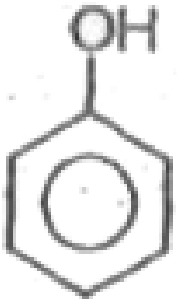
35. Most acidic among the following is



A.



B.



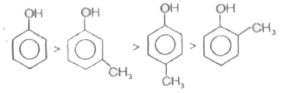
C.

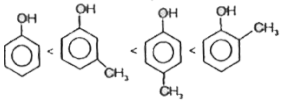
D.

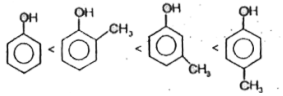
Answer: D

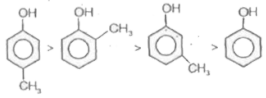
Watch Video Solution

36. Correct acidic order is

A. 

B. 

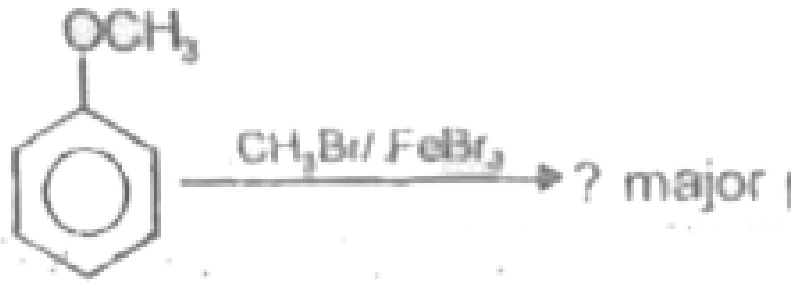
C. 

D. 

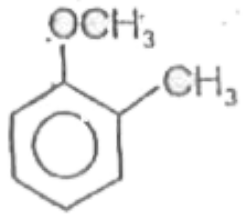
Answer: A

Watch Video Solution

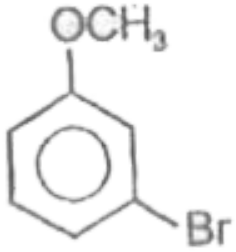
37. Major product is



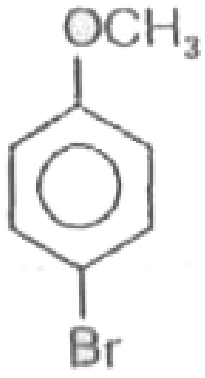
A.

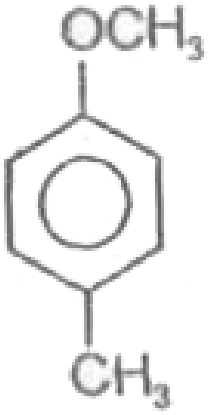


B.



C.

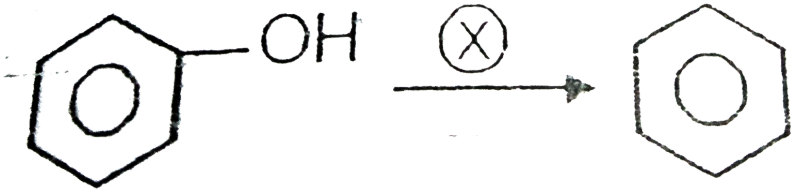




D.

Answer: D

Watch Video Solution



38.

The reagent (X) required for above conversion is

A. $LiAlH_4$

B. Zn

C. 

D. $NaBH_4$

Answer: B

Watch Video Solution

39. The electrophile involved in the Reimer-Tiemann reaction is

A. $CHCl_3$

B. $:CH_2$

C. $:CCl_2$

D. CO_2

Answer: C

Watch Video Solution

40. In Reimer - Tiemann reaction the major produc is

A. Ortho isomer due to intra molecular H-bonding

B. Meta isomer

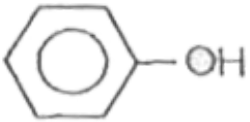
C. Para isomer due to symmetry

D. None of these

Answer: A

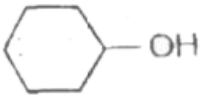
Watch Video Solution

41. Molecule which does not oxidise

A. 

B. 

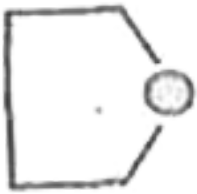
C. 

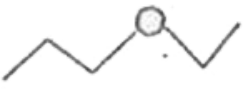
D. 

Answer: A

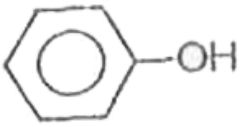
Watch Video Solution

42. Which one of the following is best lewis base ?

A. 

B. 

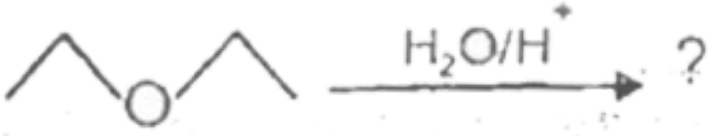
C. 

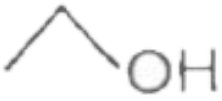
D. 

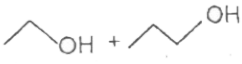
Answer: B

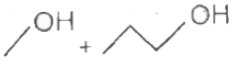
Watch Video Solution

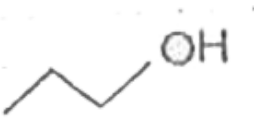
43. Product / (S) will be :



A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

44. $CH_3 - O - CH_2CH_3 \xrightarrow[\text{Excess}]{HI/\Delta} (A) + (B)$

Product (A) and (B) are

A. $CH_3OH + CH_3CH_2l$

B. $CH_3l + CH_3CH_2OH$

C. $CH_3l + CH_3CH_2l$

D. $CH_3OH + CH_3CH_2OH$

Answer: C

Watch Video Solution

45. Cumene $\xrightarrow[(II)\, H_2O, H^+]{(i)\, O_2} (X)$ and (Y) ,

(X) and (Y)respectively are :

A. Toluene, propene

B. Toluene, propylcholoride

C. Phenol, acetone

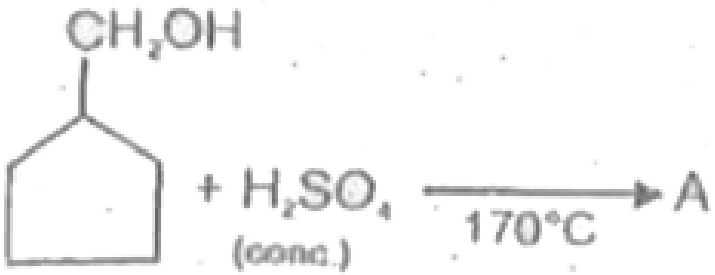
D. Phenol, acetaldehyde

Answer: C

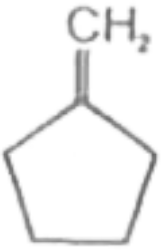
Watch Video Solution

Assignment Section B Objective Type Questions

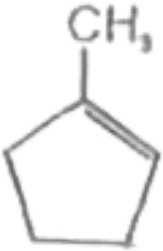
1. What is the major product A ?



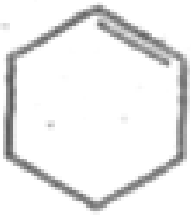
A.

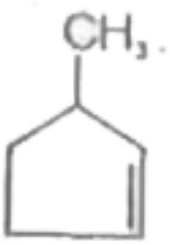


B.



C.

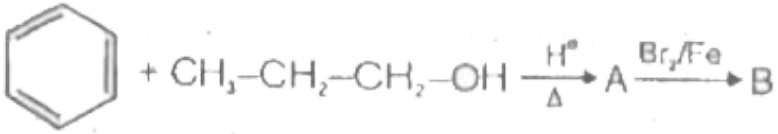


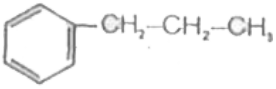
D. 

Answer: C

Watch Video Solution

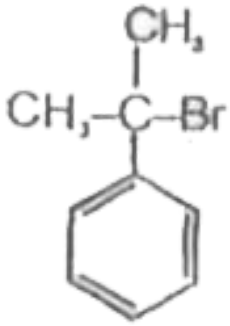
2. What is the major product B ?



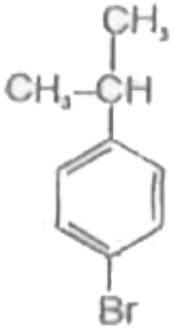
A. 

B. $CH_3 - \underset{\underset{Br}{|}}{CH} - \underset{\underset{Br}{|}}{CH_2}$

C.



D.



Answer: D

Watch Video Solution

3. Which of the following is the correct increasing order of boiling point of following compounds ?

I $CH_3 - CH_2 - CH_2OH$, II $CH_3 - \underset{\underset{OH}{|}}{CH} - CH_3$, III

$CH_3 - O - CH_2 - CH_3$

A. $II < I < III$

B. $III < II < I$

C. $I < II < III$

D. $II < III < I$

Answer: B

Watch Video Solution

4. $\underset{\underset{CH_3}{|}}{CH_3CH} - CH = CH_2 \xrightarrow[(ii)\, H_2O_2/OH]{(i)\, B_2H_4} X \xrightarrow[140^\circ]{H_2SO_4} Y$

What is Y ?

A.

$CH_3 - \underset{\underset{CH_3}{|}}{CH} - CH_2 - CH_2 - O - CH_2 - CH_2 - \underset{\underset{CH_3}{|}}{CH} - CH_3$

B. $CH_3 - \underset{\underset{CH_3}{|}}{CH} - CH = CH_2$

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

D. $CH_3 - \underset{\underset{C_2H_5}{|}}{\overset{\overset{CH_3}{|}}{C}} - O - \underset{\underset{C_2H_5}{|}}{\overset{\overset{CH_3}{|}}{C}} - CH_3$

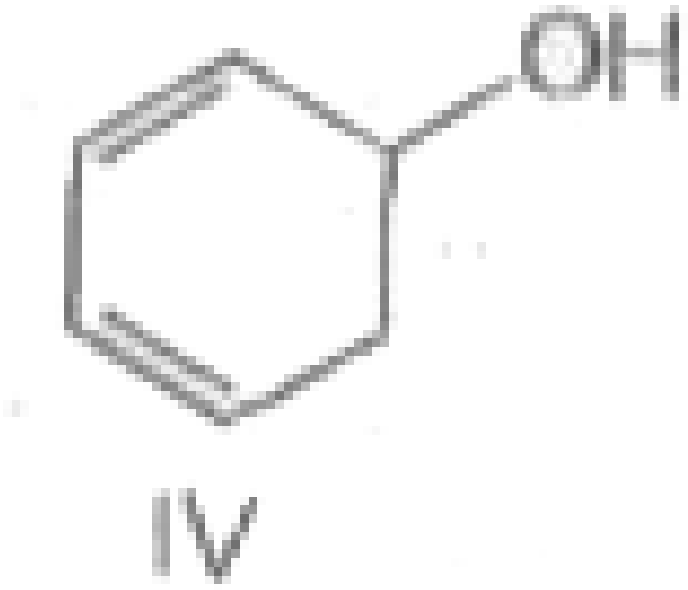
Answer: A

Watch Video Solution

5. Which of the following is the correct ease of dehydration ?

I $CH_3 - CH_2 - CH_2 - \underset{\underset{OH}{|}}{CH_2}$, II $CH_3 - CH_2 - \overset{\overset{OH}{|}}{CH} - CH_3$, III

$$CH_2 = CH - \overset{\overset{OH}{|}}{CH} - CH_3, \text{IV}$$



IV

A. $I > III > II > IV$

B. $IV > III > II > I$

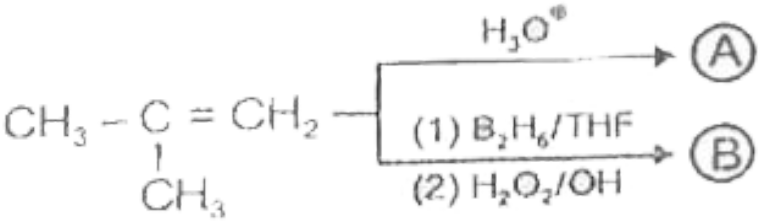
C. $IV > II > III > I$

D. $III > IV > II > I$

Answer: B

Watch Video Solution

6. Product(A) and (B)can be distinguished by



A. Sodium metal

B. Neutral $FeCl_3$

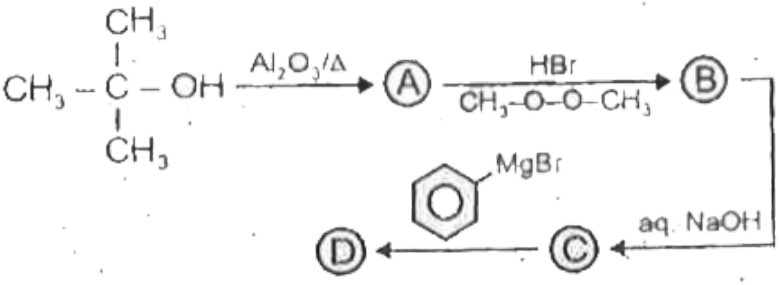
C. Lucase reagent

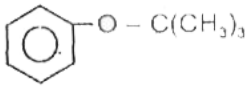
D. Esterification reaction

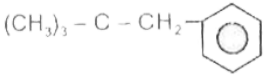
Answer: C

Watch Video Solution

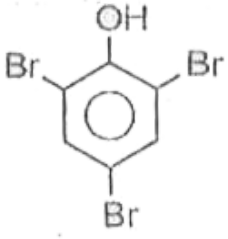
7. The end product (D) of the reaction is



A. 

B. 

C. 

D. 

Answer: C

Watch Video Solution

8. What is Z in the following sequence of reactions?

Phenol $\xrightarrow[\text{dust}]{Zn} X \xrightarrow[\text{Alhyd. } AlCl_3]{CH_3Cl} Y \xrightarrow[KMnO_4]{\text{Alkaline}} Z$ Phe

A. Benzene

B. Toluene

C. Benzldehyde

D. Benzoic acid

Answer: D

Watch Video Solution

9. $\overset{OH}{\underset{|}{}}\overset{OH}{\underset{|}{}}\overset{OH}{\underset{|}{}}$
$CH_2 - CH - CH_2 + \underset{\text{excess}}{Hi} \rightarrow X$

What is X ?

A. $\overset{|}{\underset{|}{}}\overset{|}{\underset{|}{}}\overset{|}{\underset{|}{}}$
$CH_2 - CH - CH_2$

B. $CH_2 = CH - \overset{|}{\underset{|}{CH_2}}$

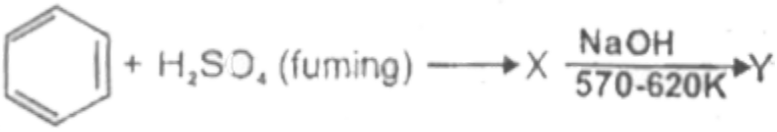
C. $CH_3 - CH = CH_2$

D. $CH_3 - \underset{|}{\overset{|}{CH}} - CH_3$

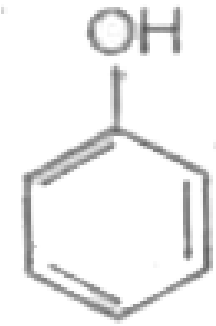
Answer: D

Watch Video Solution

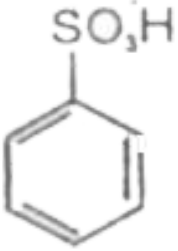
10. What Y ?



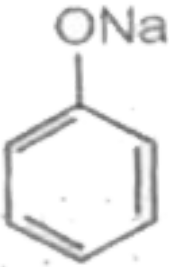
A.



B.



C.

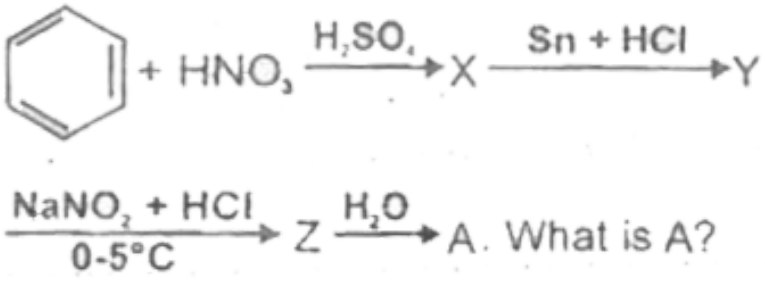


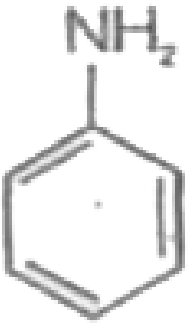
D.

Answer: C

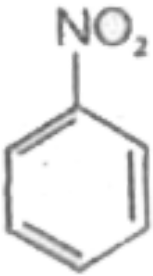
Watch Video Solution

11. What is A ?

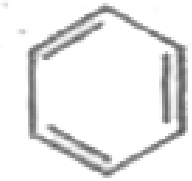


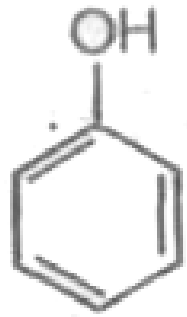


A.



B.

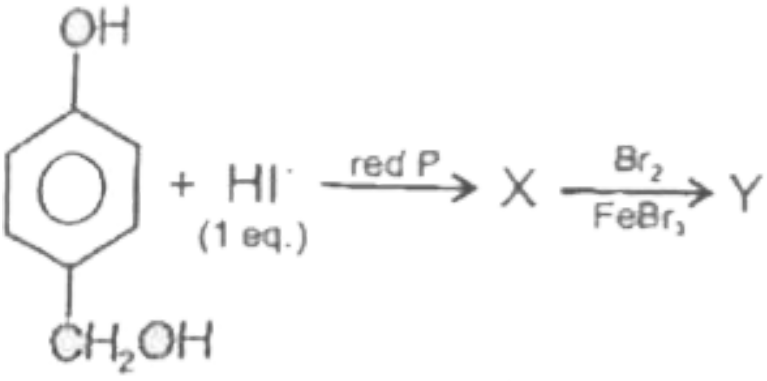
C. 

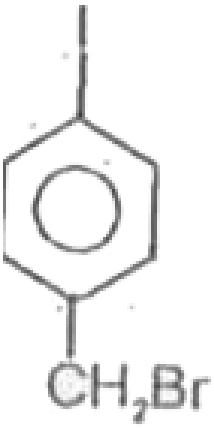
D. 

Answer: D

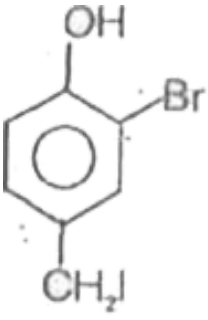
Watch Video Solution

12. What is Y ?



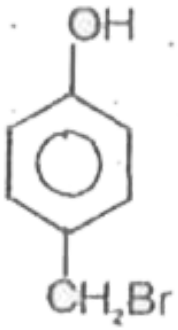


A.

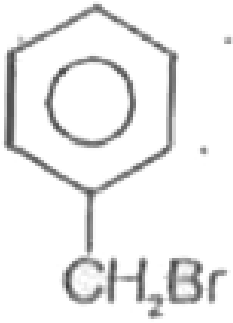


B.

C.



D.



Answer: B

Watch Video Solution

13. Which of the following will not give positive test with neutral $FeCl_3$?

A. Nitrophenol

B. Phenol

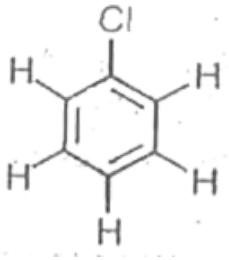
C. Allyl alcohol

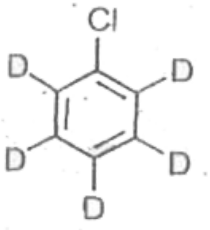
D. o-cresol

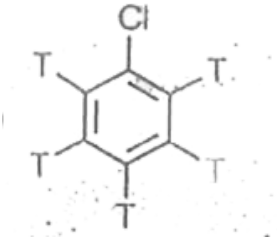
Answer: C

Watch Video Solution

14. In Dow's process haloarene is converted to phenol with fused NAOH . The most reactive compound is

A. 

B. 

C. 

D. All are equally reactive

Answer: A

Watch Video Solution

15. Among the following four compounds

(a) Phenol

(b) methyl phenol

(c) metanitrophenol

(d) paranitrophenol

the acidity order is –

A. $a > c > a > b$

B. $c > d > a > b$

C. $a > d > c > b$

D. $b > a > c > d$

Answer: A

Watch Video Solution

16. The reaction of tertiary butyl bromide with sodium methoxide gives

A. Sodium -t - butoxide

B. t-butyl methyl ether

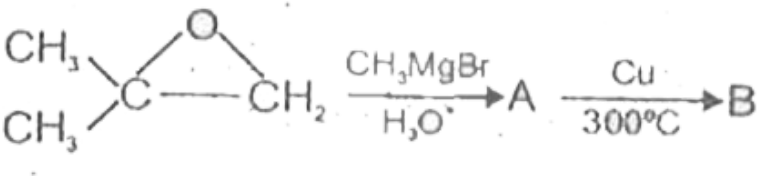
C. Isobutane

D. Isobutylene

Answer: D

Watch Video Solution

17. B is



A. $(CH_3)_3C - CHO$

B. $CH_3 - \underset{\underset{CH_3}{|}}{C} = CH - CH_3$

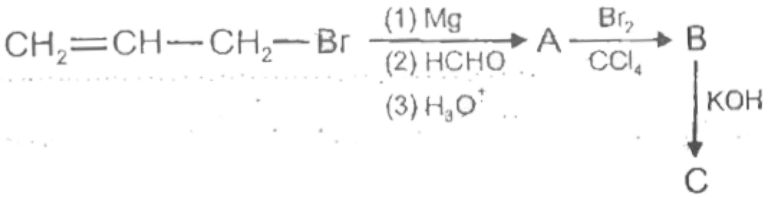
C. $(CH_3)_2CHCOCH_3$

D. $CH_3\underset{\underset{O}{||}}{C} - CH_2 = CH_2CH_3$

Answer: B

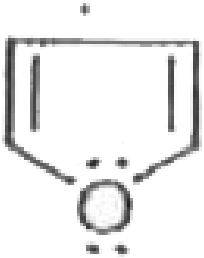
Watch Video Solution

18. Product (C) is



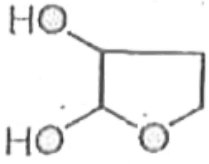
A.

B.



C. $CH_2(OH) - CH(OH) - CH_2 - CH_2 - OH$

D.



Answer: C

Watch Video Solution

19. Ethyl chloride is converted into diethyl ether by

A. Perkin's reaction

B. Grignard reaction

C. Wurtz synthesis

D. Williamson's synthesis

Answer: D

Watch Video Solution

20. Ethylene oxide when treated with Grignard reagent yields

A. Primary alcohol

B. Secondary alcohol

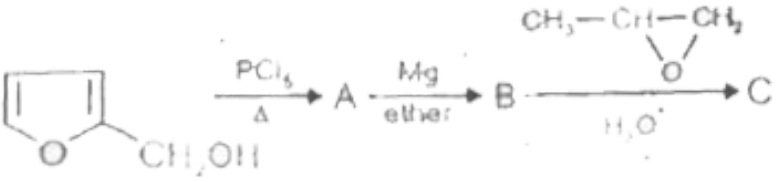
C. Tertiary alcohol

D. Cyclopropyl alcohol

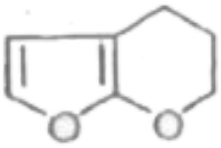
Answer: A

Watch Video Solution

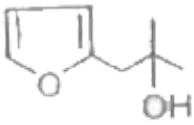
21. Product (C) is

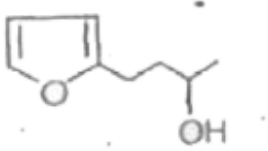


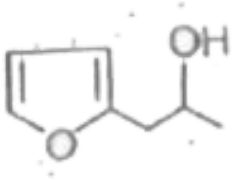
A.



B.



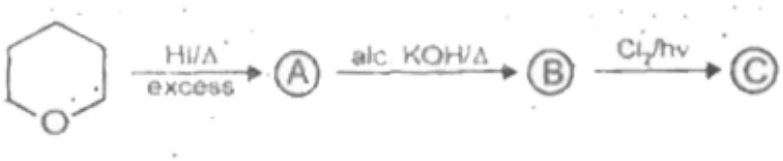
C. 

D. 

Answer: C

Watch Video Solution

22. Product © is



A. Alkyl iodide

B. Vinyl chloride

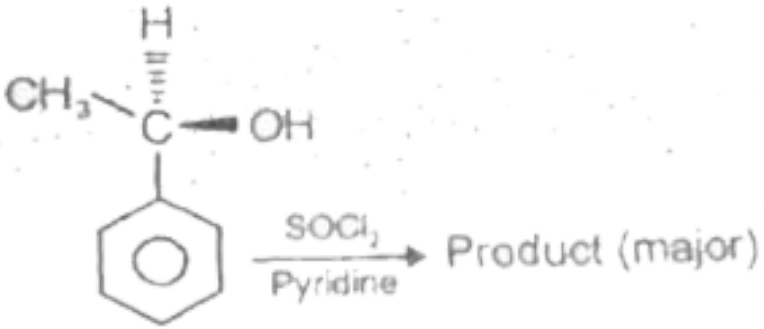
C. Vinyl iodide

D. Allyl chloride

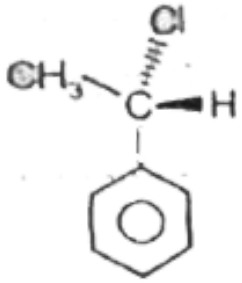
Answer: D

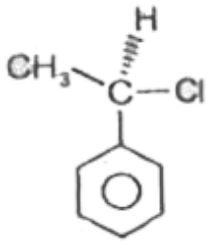
Watch Video Solution

23. The product is



A.



B. 

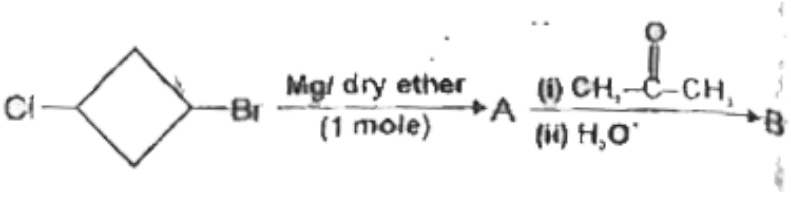
C. Mixture of (1) & (2)

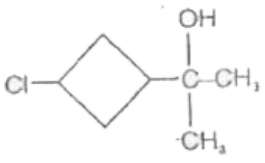
D. No reaction

Answer: A

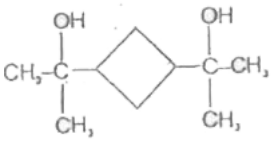
Watch Video Solution

24. What is B ?

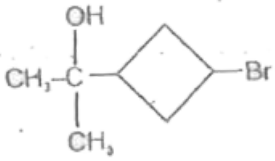


A. 

B.



C.

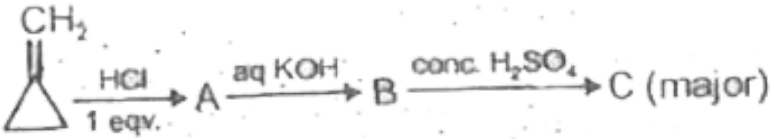


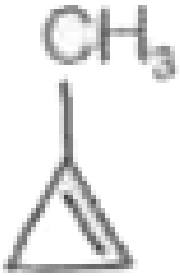
D.

Answer: A

Watch Video Solution

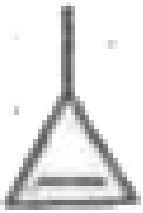
25. Product (C) is



A. 

B. 

C. 

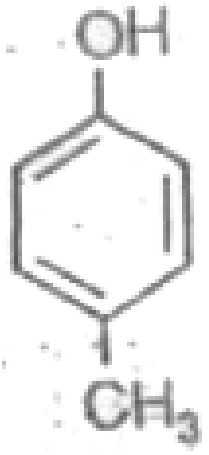
D. 

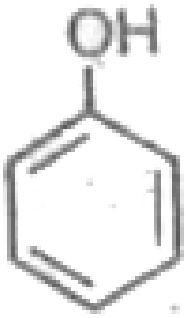
Answer: B

Watch Video Solution

Assignment Section C Previous Years Questions

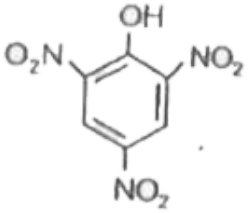
1. Which one is the most acidic compound?

A. 

B. 

C.

D.



Answer: D

Watch Video Solution

2. The heating of phenyl-methyl ethers with HI produces

A. Ethyl chlorides

B. Iodoenzene

C. Phenol

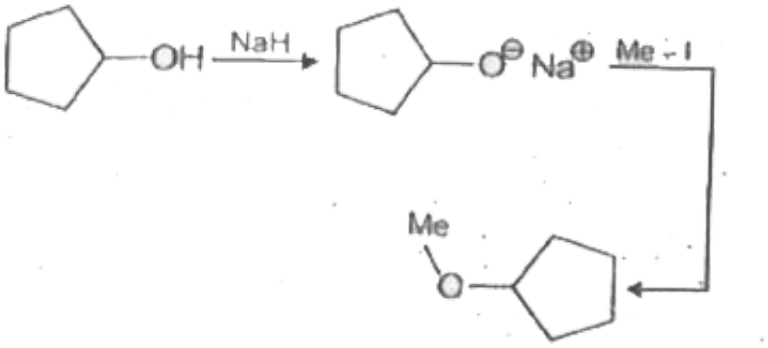
D. Benzene

Answer: D

Watch Video Solution

3. The reaction

can be classified as



A. Williamson alcohol synthesis reaction

B. Williamson ether synthesis reaction

C. Alcohol formation reaction

D. Dehydration reaction

Answer: B

Watch Video Solution

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

A. Aluminium isopropoxide

B. Acetone

C. Ozone

D. MnO_2

Answer: B

Watch Video Solution

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

A. $-CHCl_2$

B. $-CHO$

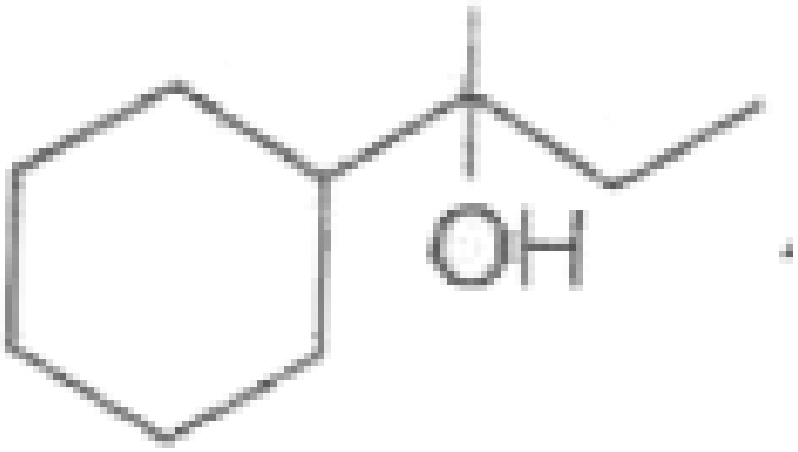
C. $-CH_2Cl$

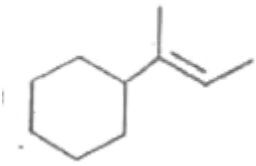
D. $-COOH$

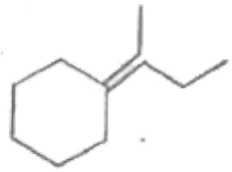
Answer: B

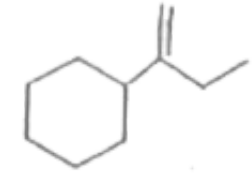
Watch Video Solution

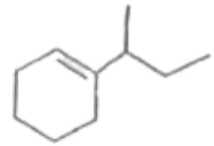
6. Which of the following is not the product of dehydration of



A. 

B. 

C. 

D. 

Answer: D

Watch Video Solution

7. Which of the following reaction(s) can be used for the preparation of alkyl halides?

(I) $CH_3CH_2OH + HCl \xrightarrow{anhy.\,ZnCl_2}$

(II) $CH_3CH_2OH + HCl \rightarrow$

(III) $(CH_3)_3COH + HCl \rightarrow$

(IV) $(CH_3)_2CHOH + HCl \xrightarrow{anhy.\,ZnCl_2}$

A. (IV) only

B. (III) and (IV) only

C. (I), (III) and (IV) only

D. (I), and (II) only

Answer: C

Watch Video Solution

8. The reaction

$$CH_3 - \underset{CH_3}{\overset{CH_3}{\underset{|}{\overset{|}{C}}}} - ONa + CH_3CH_2Cl \rightarrow CH_3 - \underset{CH_3}{\overset{CH_3}{\underset{|}{\overset{|}{C}}}} - O - CH_2 - CH_3$$

is called

A. Gatterman -Koch reaction

B. Williamson - synthesis

C. Williamson continuous etherification process

D. Etard reaction

Answer: B

Watch Video Solution

Watch Video Solution

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

A. $CH_3CHO, RMgX$

B. $C_6H_5OH, NaOH, CH_3l$

C. $C_6H_5OH,$ netural $FeCl_3$

D. $C_6H_5 - CH_3, CH_3COCl, AlCl_3$

Answer: B

Watch Video Solution

10. Identify Z in the sequence of reactions :

$$CH_3CH_2CH = CH_2 \xrightarrow[H_2O_2]{HBr} Y \xrightarrow{C_2H_5ONa} Z$$

A. $CH_3 - (CH_2)_3 - O - CH_2CH_3$

B. $(CH_3)_2CH_2 - O - CH_2CH_3$

C. $CH_3(CH_2)_4 - O - CH_3$

D. $CH_3CH_2 - CH(CH_3) - O - CH_2CH_3$

Answer: A

Watch Video Solution

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

A. $CH_3 - CH_2 - \underset{\displaystyle CH_3}{\overset{|}{CH}} - O - CH_3$

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

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

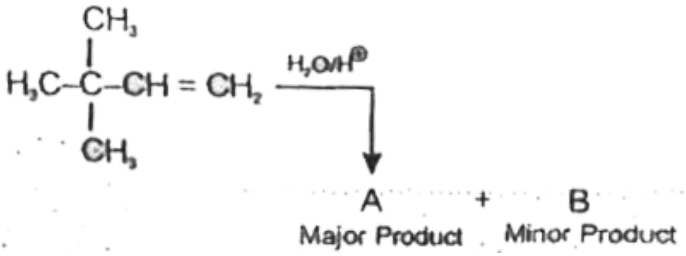
D. $CH_3 - CH_2 - CH_2 - CH_2 - O - CH_3$

Answer: B

Watch Video Solution

12. In the following reaction

The major product is



A. $H_3C - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - \underset{\underset{OH}{|}}{CH} - CH_3$

B. $H_3C - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - CH_2 - \underset{\underset{OH}{|}}{CH_2}$

C. $H_3C - \underset{\underset{OH}{|}}{\overset{\overset{CH_3}{|}}{C}} - \underset{\underset{CH_3}{|}}{CH} - CH_3$

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

Answer: C

Watch Video Solution

13. In the following reactions . ltb rgt

$$CH_3-\overset{CH_3}{\overset{|}{C}}H-\underset{OH}{\overset{|}{C}}H-CH_3 \xrightarrow{H^+/heat} \underset{\text{Major product}}{[A]} + \underset{\text{Minor product}}{[B]}$$

(ii) $$A \xrightarrow[\text{in absence of peroxide}]{\text{HBr, dark}} \underset{\text{Mejor product}}{[C]} + \underset{\text{Minor product}}{[D]}$$

The major products A and C are repectively

A. $CH_2=\overset{CH_3}{\overset{|}{C}}-CH_2-CH_3$ and $CH_3-\underset{Br}{\overset{CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2-CH_3$

B. $CH_2=\overset{CH_3}{\overset{|}{C}}-CH_2-CH_3$ and $\underset{Br}{\overset{|}{CH_2}}-\overset{CH_3}{\overset{|}{CH}}-CH_2-CH_3$

C. $CH_3-\overset{CH_3}{\overset{|}{C}}=CH-CH_3$ and $CH_3-\underset{Br}{\overset{CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2-CH_3$

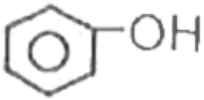
D. $CH_3-\overset{CH_3}{\overset{|}{C}}=CH-CH_3$ and $CH_3-\overset{CH_3}{\overset{|}{CH}}-\underset{Br}{\overset{|}{CH}}-CH_3$

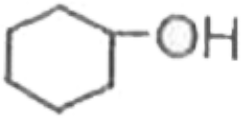
Answer: C

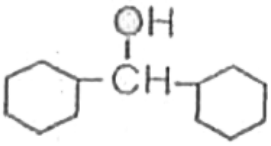
Watch Video Solution

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

A. 

B. 

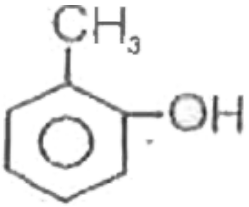
C. 

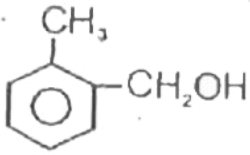
D. 

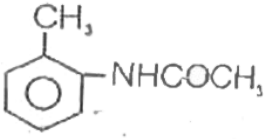
Answer: B

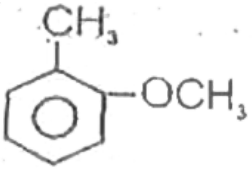
Watch Video Solution

15. Which one of the following is most reactive towards electrophillic reagent?

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

Watch Video Solution

16. Among the following four compounds

(a) Phenol

(b) methyl phenol

(c) metanitrophenol

(d) paranitrophenol

the acidity order is –

A. $d > c > a > b$

B. $c > d > a > b$

C. $a > d > c > b$

D. $b > a > c > d$

Answer: A

Watch Video Solution

17. When glycerol is treated with excess of HI, it produces -

A. 2 - iodopropane

B. Allyl iodide

C. Propene

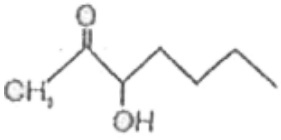
D. Glycerol triiodide

Answer: A

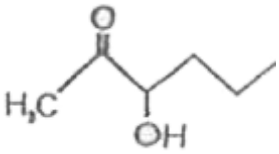
Watch Video Solution

18. Which one of the following compounds will be most readily dehydrated?

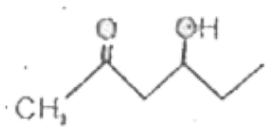
A.



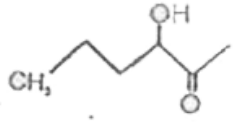
B.



C.



D.

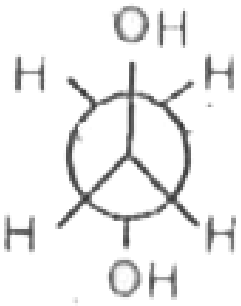


Answer: C

Watch Video Solution

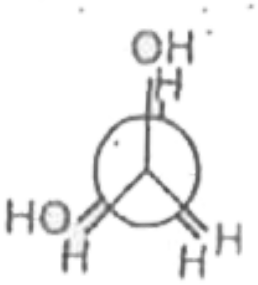
19. Which of the following conformers for ethylene glycol is most stable ?

A.

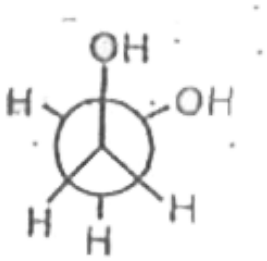


B.

C.



D.



Answer: D

Watch Video Solution

20. Consider the following reaction

$$\text{Ethanol} \xrightarrow{PBr_3} X \xrightarrow{alc.KOH} Y \xrightarrow[(ii)\, H_2O, \text{Heat}]{(i)\, H_2SO_4 \text{ room temperature}} Z,$$

The product Z is :

A. $CH_3CH_2 - O - CH_2 - CH_3$

B. $CH_3 - CH_2 - O - SO_3H$

C. CH_3CH_2OH

D. $CH_2 = CH_2$

Answer: C

Watch Video Solution

21. Consider the following reaction :

$$\text{Phenol} \xrightarrow[Zn \text{ dust}]{} X \xrightarrow[\text{Anhydrous } AlCl_3]{CH_3Cl} Y \xrightarrow[H_2O / H^+]{\text{Alkaline } KMnO_4} Z$$

The product Z is

A. Benzaldehyde

B. Benzoic acid

C. Benzene

D. Toluene

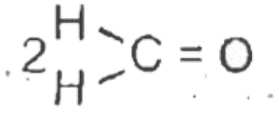
Answer: B

Watch Video Solution

22. $H_2COH.\ CH_2OH$ on heating with periodic acid gives :

A. 2HCOOH

B. $\begin{matrix} CHO \\ | \\ CHO \end{matrix}$

C. 

D. $2CO_2$

Answer: C

Watch Video Solution

23. The major organic product in the reaction

$CH_3 - O - CH(CH_3)_2 + HI \rightarrow$ product is

A. $CH_3OH + (CH_3)_2CHI$

B. $ICH_2OCH(CH_3)_2$

C. $CH_3\underset{\underset{I}{|}}{O}C(CH_3)_2$

D. $CH_3I + (CH_3)_2CHOH$

Answer: D

Watch Video Solution

24. Ethylene oxide when treated with Grignard reagent yields

A. Secondary alcohol

B. Tertiary alcohol

C. Cyclopropyl alcohol

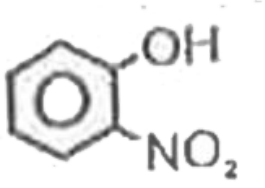
D. Primary alcohol

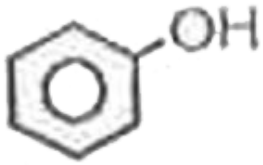
Answer: D

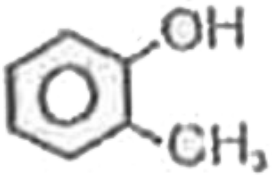
Watch Video Solution

25. Which one of the following compounds is most acidic

A. $Cl - CH_2 - CH_2 - OH$

B. 

C. 

D. 

Answer: B

Watch Video Solution

Assignment Section C Questions Asked Prior To Medical Ent Exams 2005

1. When 3, 3-dimethyl 2-butanol is heated with H_2SO_4, the major product obtained is

A. 2,3-dimethyl 2-butene

B. cis and trans isomers of 2,3-dimethy 2-butene

C. 2,3-dimethyl 1- butene

D. 3,3-dimethyl 1-butene

Answer: A

Watch Video Solution

2. The correct order of reactivity of hydrogen halides with ethyl alcohol is

A. $HCl > HBr > Hl > HF$

B. $HI > HBr > HCl > HF$

C. $HF > HCl > HBr > HI$

D. $HF > HBr > HI > HCl$

Answer: B

Watch Video Solution

3. More acidic than ethanol is

A. $CH_3CH_2CH_2CH_2CH_2CH_2CH_2CH_3$

B. $CH_3CO_2CH_2CH_3$

C. $CH_3COCH_2COCH_3$

D. CH_3COCH_3

Answer: C

Watch Video Solution

4. Which reagent converts propene to 1-propanol:

A. H_2O, H_2SO_4

B. B_2H_6, H_2O_2, OH^-

C. $Hg(Oac)_2, NaBH_4/H_2O$

D. Aq. KOH

Answer: B

Watch Video Solution

5. n-propyl alcohol and isopropyl alcohol can be chemically distinguished by which reagent : -

A. PCl_5

B. Reduction

C. Oxidation with potassium dichromate

D. Ozonolysis

Answer: C

Watch Video Solution

6. Which of the following will not form a yellow precipitate on heating with an alkaline solution of iodine :-

A. $CH_3CH(OH)CH_3$

B. $CH_3CH_2CH(OH)CH_3$

C. CH_3OH

D. CH_3CH_2OH

Answer: C

Watch Video Solution

7. The general molecular formula, which represents the homologous series of alkanols is

A. $C_nH_{2n+2}O$

B. $C_nH_{2n}O_2$

C. $C_nH_{2n}O$

D. $C_nH_{2n+1}O$

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. Acrolein

B. Formic acid

C. Allyl alcohol

D. Glycerol sulphate

Answer: A

Watch Video Solution

9. The correct acidic order of the following is

I. 

II. 

III. 

A. $I > II > III$

B. $III > I > II$

C. $II > III > I$

D. $I > III > II$

Answer: B

Watch Video Solution

10. When phenol is treated with $CHCl_3$ and $NaOH$, the product fromed is

A. Benzaldehyde

B. Salicylaldehyde

C. Salicylic acid

D. Benzoic acid

Answer: B

Watch Video Solution

11. The compound which does not react with sodium is

A. CH_3COOH

B. $CH_3 - CHOH - CH_3$

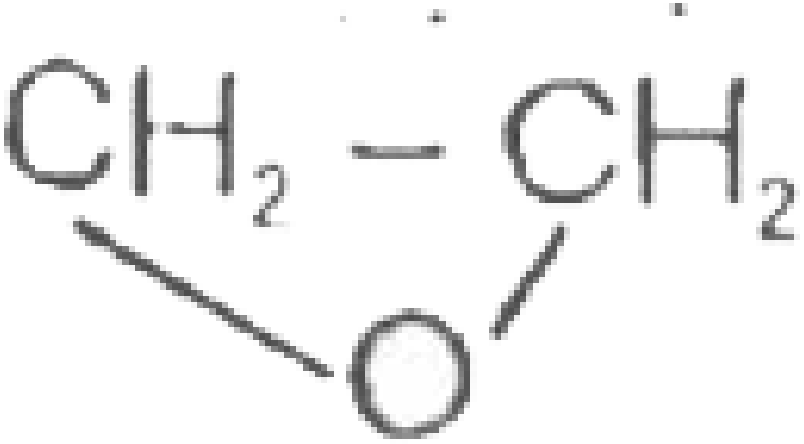
C. C_2H_5OH

D. $CH_3 - O - CH_3$

Answer: D

Watch Video Solution

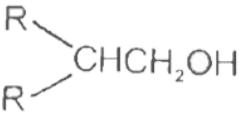
12. Reaction of with RMgX leads to formation of



A. RCH_2CH_2OH

B. $RCHOHCH_3$

C. RCHOHR

D. 

Answer: A

Watch Video Solution

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

A. 2,4,6 - trinitrophenol

B. Benzoic acid

C. o-Nitrophenol

D. Benzenesulphonic acid

Answer: C

Watch Video Solution

Assignment Section D Assertion Reason Type Question

1. Assertion : Boiling point of p-nitrophenol is greater than that of o-nitrophenol.

Reason : There is intramolecular hydrogen bonding in p-nitrophenol and intermolecular hydrogen bonding in o-nitrophenol.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark

(3)

D. If both Assertion and Reason are false statements , then mark

(4)

Answer: D

Watch Video Solution

2. A : When $C_2H_5 - O - CH_3$ is reacted with one mole of Hl then C_2H_5OH & CH_3I is formed .

R : It is S_N1 reaction

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark

(3)

D. If both Assertion and Reason are false statements , then mark

(4)

Answer: C

Watch Video Solution

3. A : When 3,3-dimethyl butan - 2 - ol is heated in presence of concentrated H_2SO_4 then 2, 3-dimethyl but -2-ene is formed as major product .

R : In this reaction , carbocation is formed as an intermediate

A. Both Assertion & Reason are true and the reason is the correct

explanation of the assertion

B. Both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. Assertion is true statement but Reason is false

D. Both Assertion and Reason are false statements

Answer: B

Watch Video Solution

4. A : In esterification reaction , HCOOH is the most reactive acid among carboxylic acid .

R : Alcohol acts as nucleophile

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: B

Watch Video Solution

5. A : Ethers can't be distilled upto dryness due to fear of explosion .

R : Due to the formation of peroxide , it is explosive

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: C

Watch Video Solution

6. Phenol is less acidic than..... .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: A

Watch Video Solution

7. A : $CH_3 - \underset{\underset{O}{||}}{C} - COOH$ gives haloform reaction .

R : It is more acidic than acetic acid .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: B

Watch Video Solution

8. A : Diphenyl ether is prepared by Williamson synthesis .

R : This reaction generally proceed by S_N1 mechanism .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: D

Watch Video Solution

9. A : Grignard's reagent is prepared in the presence of ether .

R : Grignard's reagent is soluble and stable in ether.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark

(3)

D. If both Assertion and Reason are false statements , then mark

(4)

Answer: A

Watch Video Solution

10. A : $CH_3 - \overset{CH_3}{\underset{CH_3}{\overset{|}{\underset{|}{C}}}} - CH = CH_2$ on hydroboration oxidation gives $CH_3 - \overset{CH_3}{\underset{OH}{\overset{|}{\underset{|}{C}}}} - \underset{CH_3}{\overset{|}{CH}} - CH_3$ as major product .

R : It involves the formation of carbocation so undergoes rearrangement .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: D

Watch Video Solution

11. A : Two moles of Grignard reagent is consumed in the formation of tertiary alcohol from ester following by hydrolysis .

R : One mole of Grignard reagent convert ester into Ketone and second mole of Grignard reagent adds to Ketone .

A. Both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. Both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. Assertion is true statement but Reason is false

D. Both Assertion and Reason are false statements

Answer: A

12.

A : bond angle in ether is slightly greater than normal tetrahedral

angle (109.5°)

R : the hydridisation of oxygen atom in ether is sp^3

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: B

Watch Video Solution

13. A : $CH_3 - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}} - O - CH_3$ on reaction with conc. Hl gives $CH_3 - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}} - I$ and CH_3OH major product .

R : This reaction proceed by S_N1 mechanism .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: A

Watch Video Solution

14. A : Ortho - cresol is weaker acidic than meta-cresol .

R : It is due to ortho effect .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: C

Watch Video Solution

15. A : Among all ortho halophenol , fluorophenol is least acidic .

R : Ortho - fluorophenol forms intramolecular H - bond .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: A

Watch Video Solution

16. A : In esterification reaction alcohol act as nucleophile .

R : In this reaction O - H bond of alcohol is broken .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: A

Watch Video Solution

17. A : Phenol is manufactured by Dow 's pocess.

R : It involves the formation of benzyne intermediate .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: B

Watch Video Solution

18. A : Primary alcohol is prepared by the reaction of primary amine with HNO_2 .

R : Dimethyl amine is a primary amine but does not form methyl alcohol with HNO_2 .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: C

Watch Video Solution

19. A : The reactivity order of alcohols is $1^{\circ} > 2^{\circ} > 3^{\circ}$ for the reaction in which O-H bond is broken .

R : The reactivity order of alcohol is $3^{\circ} > 2^{\circ} > 1^{\circ}$ for the reaction in which C - O bond is broken .

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: B

Watch Video Solution

20. A : The dehydration of ethyl alcohol in presence of Al_2O_3 at 633 K gives ethene.

R : The reaction proceed through the formation of carbocation intermediate.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3)

D. If both Assertion and Reason are false statements , then mark (4)

Answer: C

Watch Video Solution