

Classifications, nomenclature and isomerism of alcohols, phenols and ethers

[MHT-CET 2005]

2, 4, 6-trinitrophenol is

- a) tear gas b) picric acid c) chloropicrin d) all of these

Which of the following compounds is optically active ?

- a) 1-Butanol b) Isopropyl alcohol
c) Acetaldehyde d) 2-Butanol

[MHT-CET 2008]

The IUPAC name of $\text{H}_3\text{C}-\underset{\text{OC}_3\text{H}_7}{\text{CH}}-\text{C}_3\text{H}_7$ is

- a) 4-propoxy pentane b) pentyl propyl ether
c) 2-propoxy pentane d) 2-pentoxy propane

[MHT-CET 2009]

Which of the following compounds is optically active ?

- a) Butanal b) Butanol
c) Butan-2-ol d) 2-Methylpropan-2-ol

[MHT-CET 2010]

The correct order of dehydration of alcohols is

- a) $1^\circ > 2^\circ > 3^\circ$ b) $3^\circ > 2^\circ > 1^\circ$ c) $2^\circ > 1^\circ > 3^\circ$ d) $1^\circ > 3^\circ > 2^\circ$

[MHT-CET 2015]

What is the possible number of monohydroxy derivatives of a hydrocarbon consisting of five carbon atoms with one methyl group as a branch ?

- a) 2 b) 3 c) 4 d) 5

[MHT-CET 2019]

How many metameric ethers are represented by the molecular formula $\text{C}_4\text{H}_{10}\text{O}$?

- a) 5 b) 3 c) 2 d) 4

Which of the following compounds is dihydric phenol ?

- a) m-Cersol b) Pyrogallol c) Phloroglucinol d) Resorcinol

Which of the following compounds does not have a carboxyl group ?

- a) Picric acid b) Malic acid c) Acrylic acid d) Glutaric acid

IUPAC name of Catechol is

- a) Benzene-1, 3-diol b) 4-Methyl phenol
c) 4-Hydroxy benzaldehyde d) Benzene-1, 2-diol

The IUPAC name of neopentyl alcohol is

- a) 2-Methylpropan-1-ol b) Butan-2-ol
c) 2, 2-Dimethylpropan-1-ol d) 3-Methylbutan-2-ol

[MHT-CET 2020]

What is IUPAC name of phenetole ?

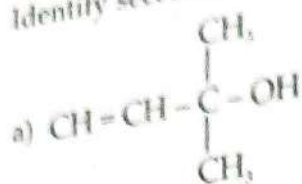
- a) 1-phenoxy propane b) Methoxy benzene
c) 2-phenoxy propane d) Ethoxy benzene

Alcohols, Phenols and Ethers

13. Which of the following compounds is also called p-cresol ?
 a) Benzene-1, 2, 4-triol
 b) Benzene-1, 3-diol
 c) 4-Methyl phenol
 d) Benzene-1-4-diol
14. Which of the following solutions is called as Lucas reagent ?
 a) Concentrated sulphuric acid with zinc sulphate.
 b) Concentrated carboic acid with zinc chloride.
 c) Concentrated nitric acid with zinc chloride.
 d) Concentrated hydrochloric acid with zinc chloride.
15. Which of the following compounds is NOT isomeric with ethoxy ethane ?
 a) 2-Methylbutan-2-ol
 b) 1-Methoxy propane
 c) 2-Methylpropan-2-ol
 d) 2-Methoxy propane
16. How many hydroxy groups are present in hydroxyquinol ?
 a) 1
 b) 2
 c) 3
 d) 4
17. The IUPAC name of $\text{CH}_3-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}(\text{CH}_3)_2$ is
 a) 1-Ethoxy isobutane
 b) 3-Ethoxy-2-methylpropane
 c) 1-Ethoxy butane
 d) 1-Ethoxy-2-methylpropane
18. Which among the following is a dihydric phenol ?
 a) p-cresol
 b) Pyrogallol
 c) Catechol
 d) Phloroglucinol
19. What is IUPAC name of 3-chloropropyl ethyl ether ?
 a) 3-chloro-1-ethoxypropane
 b) 1-chloro-3-propoxyethane
 c) 1-chloro-3-ethoxypropane
 d) 3-chloro-1-propoxyethane
20. Which among the following is allylic secondary alcohol ?
 a) But-2-en-1-ol
 b) But-3-en-2-ol
 c) Prop-2-en-1-ol
 d) 2-Methylbut-3-en-2-ol
21. Which of the following is dihydric phenol ?
 a) Resorcinol
 b) Phloroglucinol
 c) m-Cresol
 d) Pyrogallol
22. Which among the following is an example of allylic alcohol ?
 a) 2-Methylbut-3-en-2-ol
 b) 2-Phenylpropane-2-ol
 c) Propane-1, 3-diol
 d) Propane-1, 2, 3-triol
23. Which of the following is NOT dihydric phenol ?
 a) Catechol
 b) Hydroquinone
 c) Resorcinol
 d) α -naphthol
24. Which of the following compounds does NOT contain >C=O group ?
 a) Ester
 b) Amide
 c) Ether
 d) Acyl halide
25. Number of oxygen atoms present in salicylaldehyde are
 a) 3
 b) 1
 c) 4
 d) 2
26. What is IUPAC name of hydroquinone ?
 a) Benzene-1, 3, 5-triol
 b) Benzene-1, 2-diol
 c) Benzene-1, 4-diol
 d) Benzene-1, 2, 4-triol
27. Which of the following benzylic alcohols is tertiary alcohol ?
 a) 2-phenylpropan-2-ol
 b) 1-phenylpropan-2-ol
 c) Phenyl methanol
 d) 1-phenyl ethanol
28. The number of σ bonds in carboic acid are
 a) 8
 b) 12

40. In carbinol system isobutyl alcohol is called as
 a) Ethyl methyl carbinol
 c) Isopropyl carbinol

41. Identify secondary allylic alcohol from following.



42. The common name of Benzene-1, 2-diol is
 a) Pyrogallol
 b) Resorcinol

43. Which among the following isomers of $\text{C}_4\text{H}_9\text{OH}$ has lowest boiling point?
 a) Isobutyl alcohol
 b) n-Butyl alcohol
 c) tert-Butyl alcohol
 d) sec-Butyl alcohol

44. Which of the following is NOT dihydric alcohol?
 a) Catechol
 b) Hydroquinone

45. What is IUPAC name of catechol?
 a) Benzene-1, 3, 5-triol
 b) Benzene-1, 2-diol
 c) Benzene-1, 3-diol
 d) Benzene-1, 4-diol

46. Crotonyl alcohol is an example of
 a) benzylic alcohol
 b) polyhydric alcohol
 c) allylic alcohol
 d) vinylic alcohol

47. What is IUPAC name of phloroglucinol?
 a) Benzene-1, 3-diol
 b) Benzene-1, 4-diol
 c) Benzene-1, 3, 5-triol
 d) Benzene-1, 2, 3-triol

[MHT-CET 2022]

48. What is the number of hydroxyl groups present in propylene glycerol?
 a) 4
 b) 1
 c) 2
 d) 3

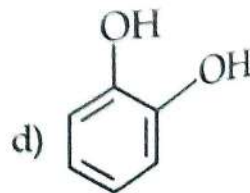
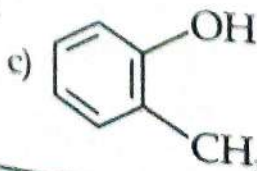
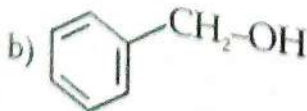
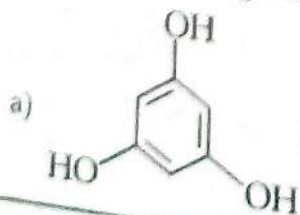
49. The compound $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}_2-\text{OH}$ is also called as

- a) Ethylene glycol
 b) Benzenol
 c) Crotonyl alcohol
 d) Propylene glycol

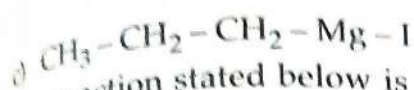
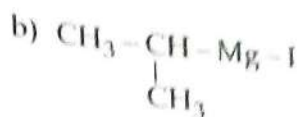
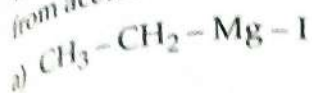
50. Which among the following compounds is a primary alcohol?
 a) 2-Methylpropan-1-ol
 b) 2-Methylpropan-2-ol
 c) Butan-2-ol
 d) Cyclobutanol

51. What is the IUPAC name of picric acid?
 a) 2, 4-Dinitrophenol
 b) 2, 4, 6-Trinitrophenol
 c) m-Nitrobenzoic acid
 d) 2, 3-Dinitrophenol

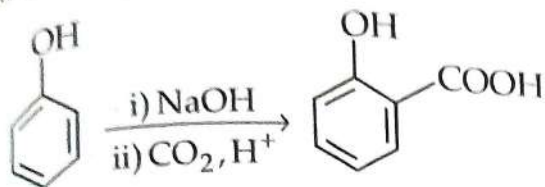
52. Which one among the following is an alcohol?



Which of the following Grignard reagents, is used to prepare 2-methylpentan-2-ol from acetone ?



The reaction stated below is named as



a) Kolbe's reaction

b) Sandmeyer's reaction

c) Reimer - Tiemann reaction

d) Stephen reaction

Which of the following processes of preparation of phenol yields valuable by product acetone ?

a) From isopropyl benzene using air and further acid hydrolysis

b) From aniline by diazotization

c) From benzene sulphonic acid by treating with NaOH, H^+

d) From chlorobenzene by Raschig process

Which of the following alcohols is NOT prepared by reduction of carbonyl compounds?

a) 2-Methylpentan-2-ol

b) Pentan-1-ol

c) 3-Methylpentan-2-ol

d) Pentan-2-ol

[MHT-CET 2021]

Which of the following compounds on reaction with Grignard's reagent followed by hydrolysis forms primary alcohol ?

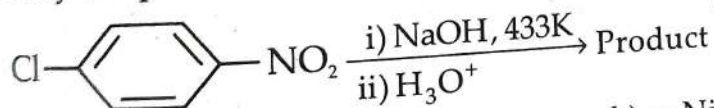
a) Propanal

b) Propanone

c) Ethanal

d) Methanal

Identify the product obtained in the following reaction.



a) m-Nitrophenol

b) o-Nitrophenol

c) 2, 4, 6-trinitrophenol

d) p-Nitrophenol

Which of the following compounds on reaction with Grignard reagent followed by hydrolysis forms secondary alcohol ?

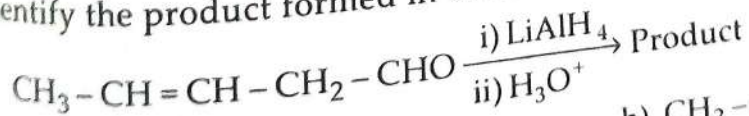
a) CH_3CHO

b) HCHO

c) $\text{CH}_3\text{CH}_2\text{COCH}_3$

d) CH_3COCH_3

Identify the product formed in the following reaction,



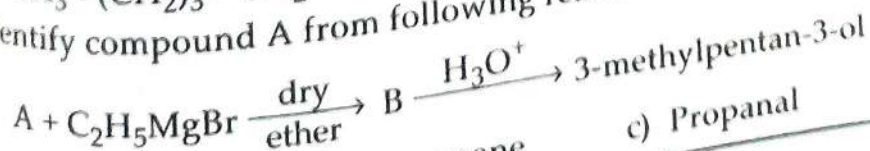
a) $\text{CH}_3\text{-CH=CH-CH}_2\text{-OH}$

b) $\text{CH}_3\text{-CH-CH=CH-CH}_2\text{-OH}$

c) $\text{CH}_3\text{-(CH}_2\text{)}_3\text{-CH}_2\text{-OH}$

d) $\text{CH}_3\text{-CH=CH-CH}_2\text{-CH}_2\text{-OH}$

Identify compound A from following reaction.



a) Butanal

b) Propanone

c) Propanal

d) Butanone

[MHT-CET 2009]

64. Which alcohol of molecular formula C_4H_9OH cannot be obtained by the reduction of carbonyl compound?
- a) 2-Methylpropan-1-ol
b) 2-Methylpropan-2-ol
c) Butanol
d) Butan-2-ol

[MHT-CET 2016]

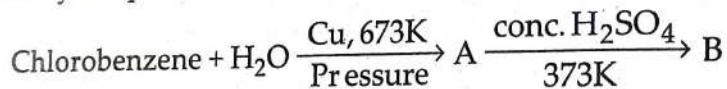
65. Name the catalyst used in commercial method of preparation of phenol.
- a) Silica
b) Calcium phosphate
c) Anhydrous aluminium chloride
d) Cobalt naphthenate

[MHT-CET 2019]

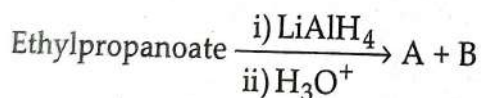
66. Propene when treated with cold conc. H_2SO_4 forms a compound which on heating with water gives
- a) propan-1-ol
b) butan-1-ol
c) propan-2-ol
d) ethanol
67. Isobutylene on hydroboration followed by oxidation with hydrogen peroxide in presence of base yields
- a) n-butyl alcohol
b) tert-butyl alcohol
c) sec-butyl alcohol
d) isobutyl alcohol

[MHT-CET 2020]

68. Identify the product B in following conversion.



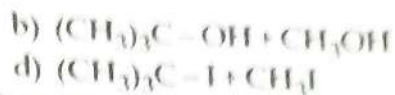
- a) Benzene sulphonic acid
b) 2-Hydroxybenzene sulphonic acid
c) 3-Hydroxybenzene sulphonic acid
d) 4-Hydroxybenzene sulphonic acid
69. Identify the products A and B in following reaction.



- a) A = Butanoic acid, B = Methanoic acid
b) A = Propanoic acid, B = Ethanal
c) A = Propanal, B = Ethanoic acid
d) A = Propan-1-ol, B = Ethanol
70. Which of the following compounds is obtained as valuable byproduct in preparation of phenol from cumene?
- a) Propan-1-ol
b) Propanal
c) Propanone
d) Propan-2-ol
71. Which of the following alcohols is NOT prepared by acid catalyzed hydration of alkenes?
- a) Ethanol
b) 2-Methylpropan-2-ol
c) Propan-1-ol
d) Propan-2-ol
72. Which of the following is reacted with benzaldehyde to obtain 1-phenylethanol?
- a) C_6H_5MgBr
b) CH_3MgBr
c) CH_3CH_2MgBr
d) $C_6H_5CH_2MgBr$
73. Which of the following reactions yields propan-2-ol?
- a) $H-CHO \xrightarrow[H_3O^+]{C_2H_5MgBr/\text{ether}}$
b) $CH_3-CH=CH_2 \xrightarrow[\text{ii) } H_2O]{\text{i) } B_2H_6}$
c) $CH_3-CH=CH_2 \xrightarrow[\text{ii) } H_2O]{\text{i) cold conc. } H_2SO_4}$
d) $CH_3-CO-CH_3 \xrightarrow{CH_3MgI/\text{ether}}$

Alcohols, Phenols

What are the products of the following reaction ?



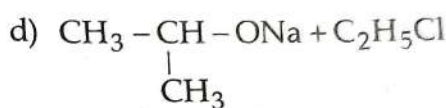
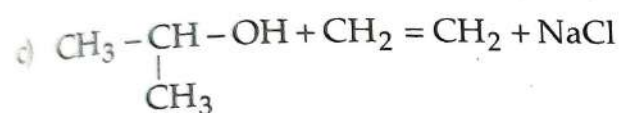
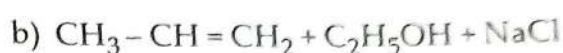
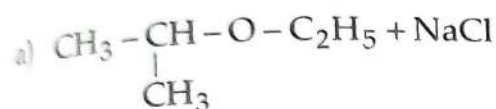
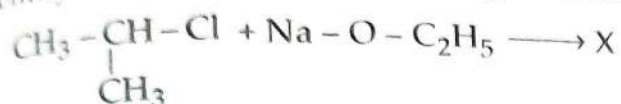
[MHT-CET 2021]

Which among the following compounds is gaseous at room temperature ?

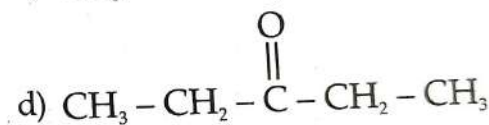
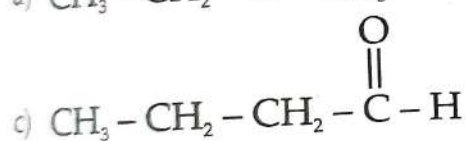
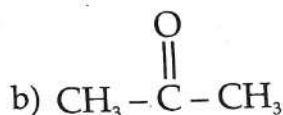
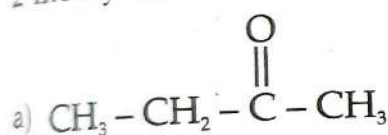
- a) Ethoxy ethane
 c) 1-Methyl propane

- b) 1-Ethoxy propane
 d) Methoxy ethane

Identify the product X in following reaction,



Which of the following compounds reacts with methyl magnesium bromide to form 2-methylbutan-2-ol ?

The bond angle $-\underset{\substack{| \\ |}}{C}-O-\underset{\substack{| \\ |}}{C}-$ in ether is

a) 90°

b) 110°

c) 120°

d) 180°

Anisole when heated with dilute sulphuric acid gives

- a) pyrogallol and methanol
 c) methanol and phenol

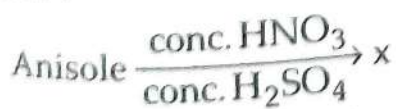
- b) phenol and ethanol
 d) ethanol and phoroglucinol

According to carbinol system, the name of isopropyl alcohol is

- a) Ethyl carbinol
 c) Dimethyl carbinol

- b) Methyl carbinol
 d) Propyl carbinol

Which among the following is obtained as major product x in the reaction stated below ?



- a) 2, 4, 6-Trinitro anisole
 c) 2-Nitro anisole

- b) 4-Nitro anisole
 d) 3-Nitro anisole

Ethers when dissolved in cold concentrated sulphuric acid form

- a) Alkanoic acids

- b) Oxonium salts
 d) Alkyl hydrogen sulphates