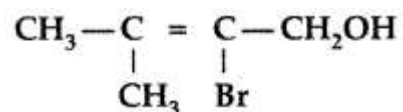


Important Questions for Class 12

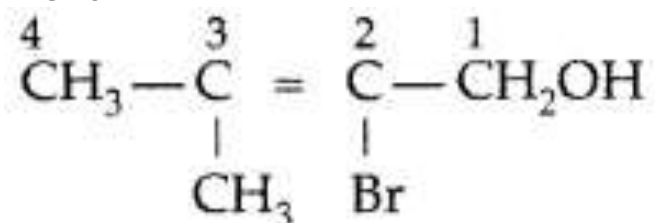
Chemistry Chapter 11- Alcohols, Phenols and Ethers

Question 1.

Give the IUPAC name of the following compound :



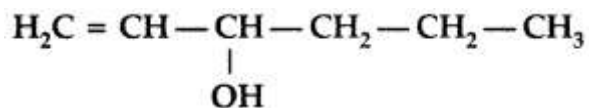
Answer:



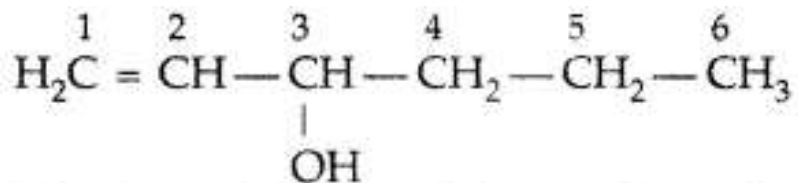
IUPAC name : 2-Bromo-3-methyl-but-2-ene-1-ol

Question 2.

Give the IUPAC name of the following



Answer:



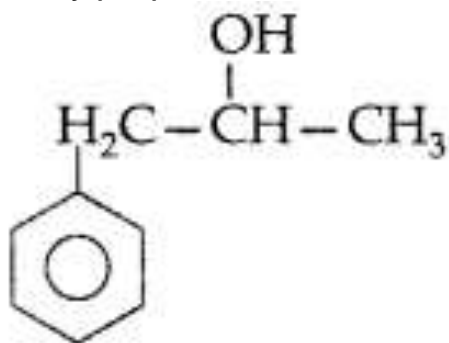
IUPAC Name : *Hex-1-en-2-ol or 3-Hexenol*

Question 3.

Write the structure of the molecule of a compound whose IUPAC name is 1-phenylpropan-2-ol.

Answer:

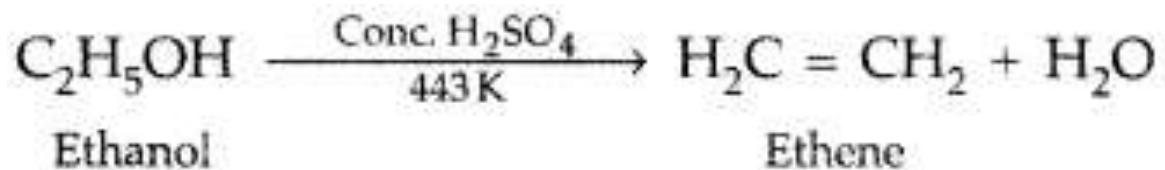
1-phenylpropan-2-ol



Question 4.

How would you convert ethanol to ethene?

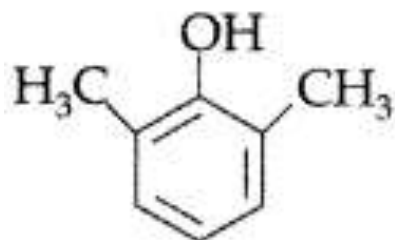
Answer:



Question 5.

Draw the structure of 2, 6-Dimethylphenol.

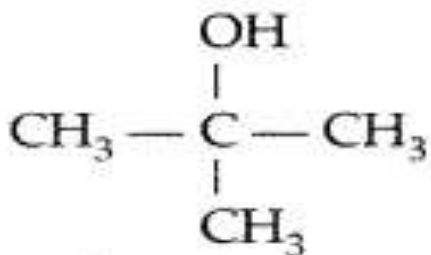
Answer:



Question 6.

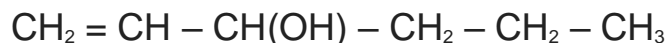
Draw the structural formula of 2-methylpropan-2-ol molecule.

Answer:

**Question 7.**

Draw the structure of hex-1-en-3-ol compound.

Answer:

**Question 8.**

Ortho nitrophenol has lower boiling point than p-nitrophenol. Why ?

Answer:

Ortho-nitrophenol has lower boiling point due to formation of intramolecular H-bonding whereas p-nitrophenol forms intermolecular H-bonding.

Question 9.

Ortho-nitrophenol is more acidic than ortho-methoxyphenol. Why?

Answer:

NO_2 group is an electron withdrawing group while methoxy group is electron donating in nature. The release of H^+ is easier from O-nitrophenol while it is difficult from O-methoxyphenol.

Question 10.

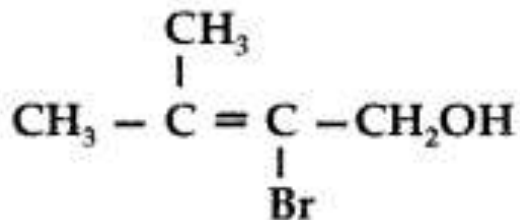
The C-O bond is much shorter in phenol than in ethanol. Give reason.

Answer:

Carbon of C-O bond of phenol is Sp^2 hybridised, so it acquires a partial double bond character but in ethanol it is Sp^3 hybridised and a single bond. Double bond is shorter than a single bond.

Question 11.

Write the IUPAC name of the following :



Answer:

IUPAC name : 2-Bromo-3-methyl but-2-en-1-ol.

Question 12.

Of the two hydroxy organic compounds ROH and R'OH, the first one is basic and other is acidic in behaviour. How is R different from R'?

Answer:

When R = alkyl, ROH behaves as a bronsted base and when R' = aryl, R'OH behaves as a bronsted acid.

Question 13.

Give a chemical test to distinguish between 2-Pentanol and 3-Pentanol.

Answer:

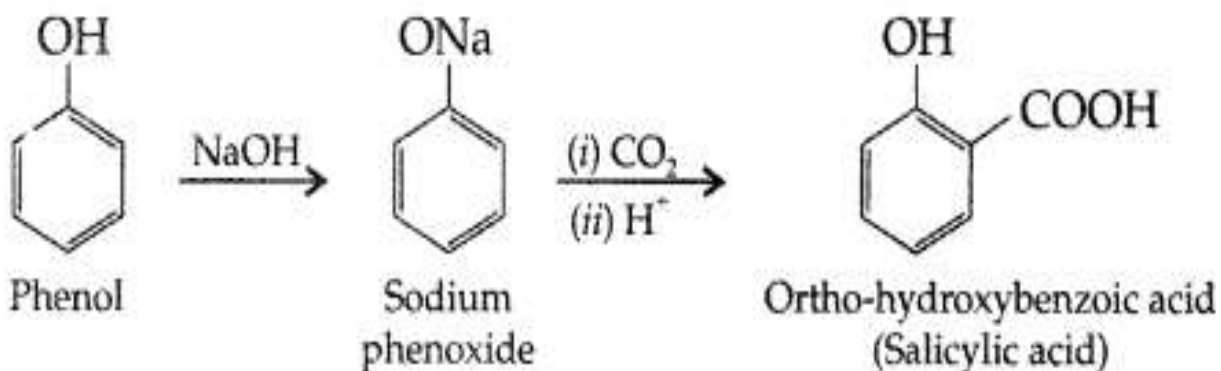
2-pentanol gives Iodoform test with yellow ppt. of Iodoform while 3-pentanol does not give this test.

Question 14.

Write the chemical reaction to explain Kolbe's reaction.

Answer:

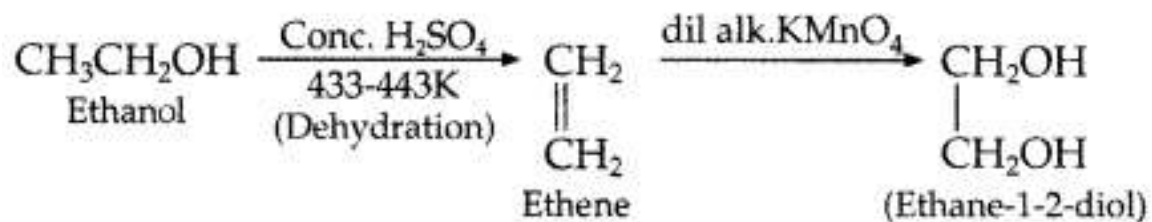
Kolbe's reaction : Phenol reacts with CO₂ in presence of sodium hydroxide (NaOH) at 4 – 7 Atm and 390 – 410 K giving salicylic acid



Question 15.

How would you obtain ethane-1, 2-diol from ethanol?

Answer:

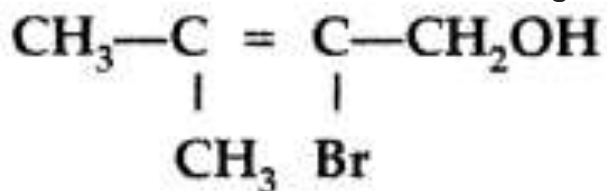
**Question 16.**

How would you obtain acetophenone from phenol?

Answer:

**Question 17.**

Write IUPAC name of the following :

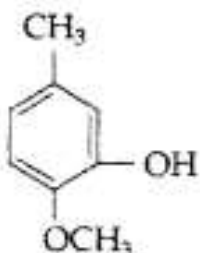


Answer:

IUPAC name : 2-Bromo-3-methylbut -2-ene-1-ol

Question 18.

Write IUPAC name of the following (Comptt. All India 2013)



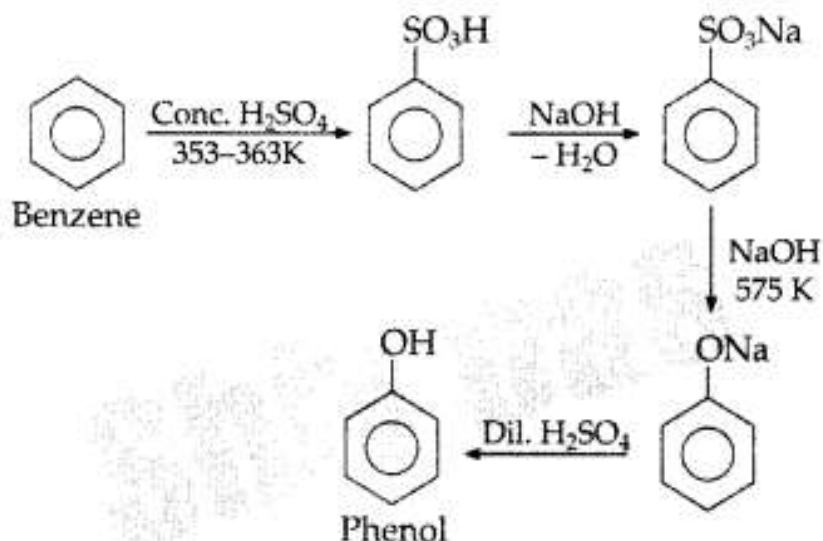
Answer:

IUPAC name : 2-Methoxy-5-methyl phenol

Question 19.

How would you obtain phenol from benzene?

Answer:



Question 20.

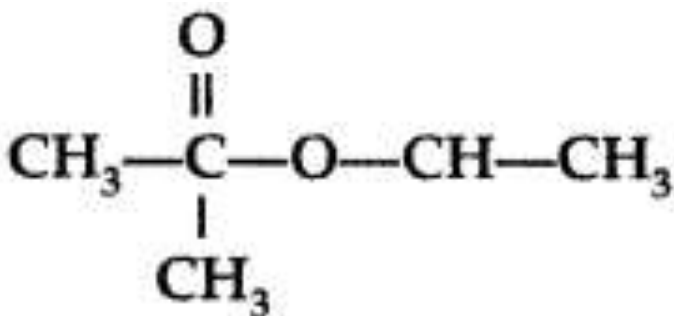
Which of the following isomers is more volatile : o-nitrophenol or p-nitrophenol?

Answer:

o-nitrophenol is more volatile than p-nitrophenol due to intramolecular hydrogen bonding.

Question 21.

Name the alcohol that is used to make the following ester :

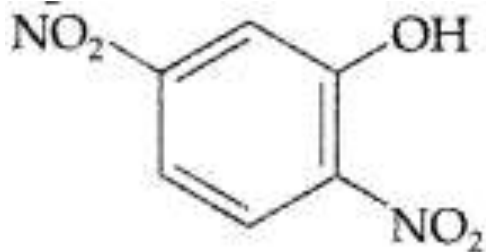


Answer:

Alcohol used : Propan-2-ol

Question 22.

Write the IUPAC name of the given compound

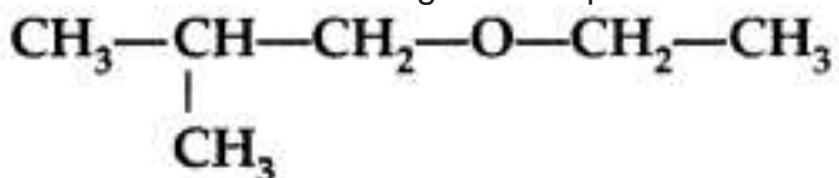


Answer:

2, 5-dinitrophenol.

Question 23.

Write the IUPAC name of given compound:

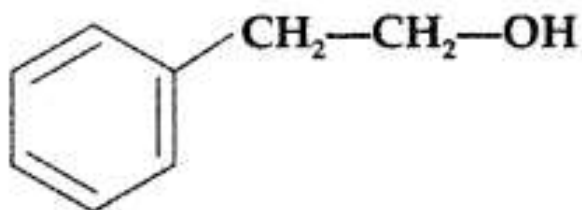


Answer:

IUPAC name : 1-Ethoxy-2-methylpropane

Question 24.

Write the IUPAC name of the given compound:



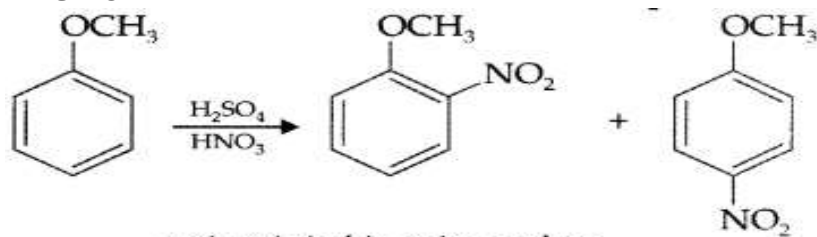
Answer:

2-Phenylethanol

Question 25.

Write equation of the nitration of anisole.

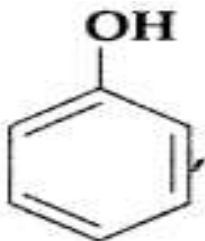
Answer:



p-nitro Anisol is major product

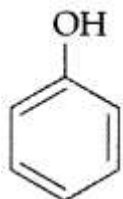
Question 26.

Out of CH_3OH and



, which one is more acidic?

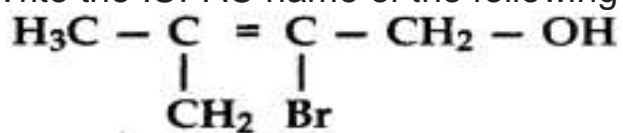
Answer:



is more acidic, as Phenoxide formed is more stabilized by Resonance.

Question 27.

Write the IUPAC name of the following compound:

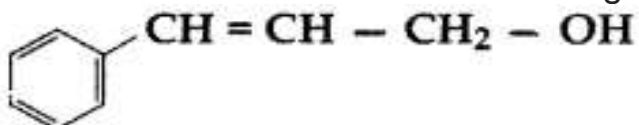


Answer:

2-Bromo-3-methylbut-2-enol-1-ol

Question 28.

Write the IUPAC name of the following compound:

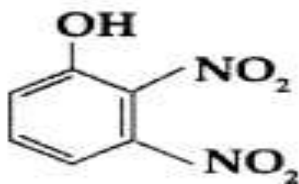


Answer:

3-phenylprop-2-en-1-ol

Question 29.

Write IUPAC name of the following compound :



Answer:

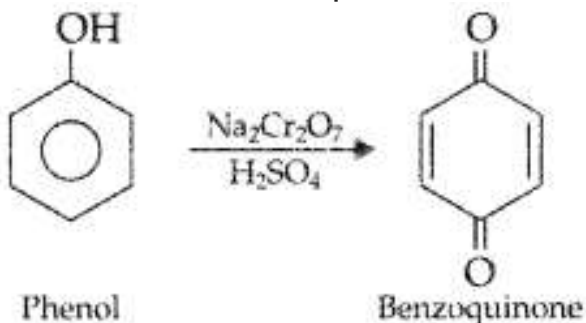
2, 3-Dinitro phenol

Question 30.

What happens when phenol is oxidized by $\text{Na}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4$?

Answer:

Phenol forms benzoquinone on oxidation with $\text{Na}_2\text{Cr}_2\text{O}_7 / \text{H}_2\text{SO}_4$,

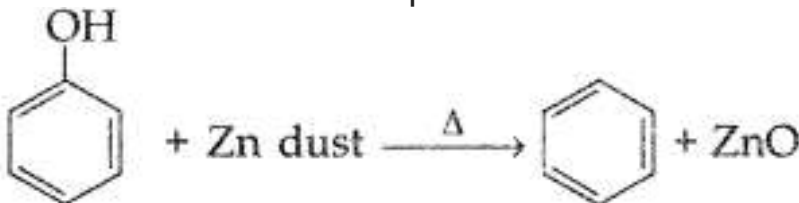


Question 31.

What happens when phenol is heated with zinc dust?

Answer:

Benzene is formed when phenol is heated with zinc dust.



Question 32.

What happens when phenol is treated with bromine water?

Answer:

2, 4, 6-tribromophenol is formed when phenol is treated with bromine water.

