

Saitechinfo NEET-JEE Academy

Sure! Here are some **word problems based on Alcohols** for NEET-level practice, covering **concepts like reactions, conversions, and mechanisms**:

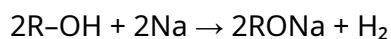
Word Problems – Alcohols

1. Hydrogen Gas Evolved

Problem:

When 4.6 g of an alcohol is treated with metallic sodium, 1.12 L of hydrogen gas is liberated at STP. What is the molecular formula of the alcohol?

Hint: Use the relation



Molar volume of H_2 at STP = 22.4 L

2. Conversion Puzzle

Problem:

An organic compound A with molecular formula C_2H_6O gives hydrogen gas on reaction with Na and ethene gas on heating with concentrated H_2SO_4 . Identify A and write the reactions.

3. Functional Group Identification

Problem:

A compound B ($C_4H_{10}O$) is oxidized to a ketone C. B does not react with Lucas reagent at room temperature. Identify B and C.

Hint: Lucas test helps differentiate primary, secondary, and tertiary alcohols.

4. Dehydration Mechanism

Problem:

Ethanol is heated with concentrated H_2SO_4 at 443 K. Write the mechanism of the product formation and name the reaction.

5. Grignard Reaction

Problem:

Propanal reacts with methyl magnesium bromide followed by acid hydrolysis to give compound X. Identify X and the type of alcohol formed.

6. Victor Meyer Test Interpretation

Problem:

An unknown alcohol gives a **red** colour in Victor Meyer test. What is the class of the alcohol? Write the steps of this test and explain the result.

7. Interconversion Challenge**Problem:**

How will you convert:

- Propene → Propan-2-ol
- Ethanol → Ethanoic acid

Name the reagents used in each step.
