

CHE 102 – Review – E2 – Miscellaneous

1. Miscellaneous

<b>Draw an example of Primary, Secondary and Tertiary Alcohols.</b>	<b>Why does it matter if an alcohol is 1°, 2°, or 3°?</b>
<b>What is a thiol? How do you name a thiol? Draw and name an example.</b>	<b>Illustrate how an alcohol can behave like both an Acid and a Base</b>
<b>Draw and label (a) hemiacetal, (b) hemiketal (c) acetal (d) ketal.</b>	<b>What are some common uses for Alcohols? Ethers? Aldehydes? Ketones?</b>
<b>What is the difference between Intermolecular and Intramolecular Dehydration? Draw two reactions illustrating this.</b>	

2. Oxidation and Reduction

<b>Define Oxidation and Reduction in terms of the Gain and Loss of (a) electrons (b) bonds to Oxygen (c) bonds to Hydrogen (d) energy transfer.</b>	<b>What reaction arrows are associated with oxidation/reduction reactions?</b>
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### 3. IMF's

Intermolecular Force	Definition + Important Details	Example	Miscellaneous
London Dispersion Forces (LDF)			
Dipole-Dipole (DD)			
H-bonding (HB)			
Ion-Dipole (ID)			
Ionic (I)			

### 4. Effect of IMF's on Solubility and Boiling Points/Melting Points

Effect of Functional Groups on Solubility in Water (Alcohol, Ether, Aldehyde, Ketone)	Effect of Functional groups on Boiling Point/Melting Points. (Alcohol, Ether, Aldehyde, Ketone)
<p>Draw an example of the Hydrogen bonding between:</p> <p>(a) Water – Water</p> <p>(b) Water – Alcohol</p> <p>(c) Alcohol-Alcohol</p>	<p>Draw an example of the functional group in Alcohols, Ethers, Aldehydes and Ketones and discuss the IMF each is capable of.</p>
How does the size of the R group on a molecule effect: Boiling and Melting Points? Why?	How does the size of the R group on a molecule effect: Solubility? Why?