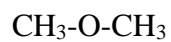


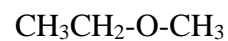
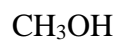
Alcohol, Phenol, Ether Problems

1. On the following compound identify the primary, secondary, tertiary, and quaternary carbons.



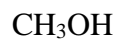
2. Shown below are several molecules. Label each as either an alcohol, a phenol, or an ether.

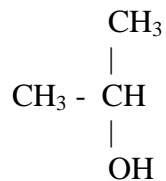


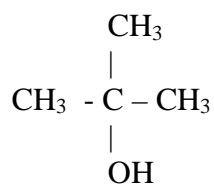


3. What is the name of the functional group that is found on both alcohols and phenols?

4. Shown below are the structures of several alcohols. Tell whether the alcohol is primary, secondary, or tertiary.

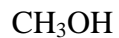




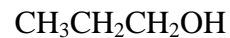


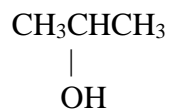


5. Write the IUPAC names of the following alcohols.

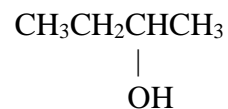






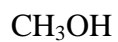






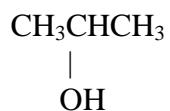
6. How does hydrogen bonding explain the elevated boiling point of alcohols?

7. Label each compound as soluble, slightly soluble or insoluble in water.

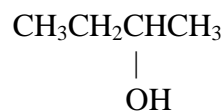




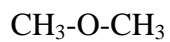






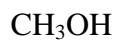


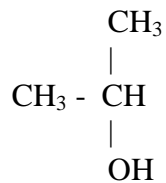
8. Label each of the following compounds as neutral or acidic.

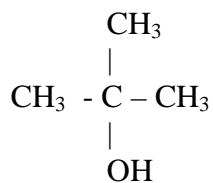




9. For each of the following compounds tell how long it would take for a white cloudy layer to form when mixed with the Lucas Reagent.

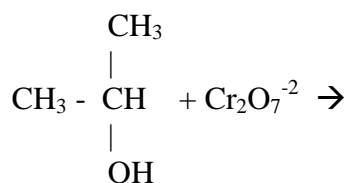
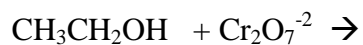
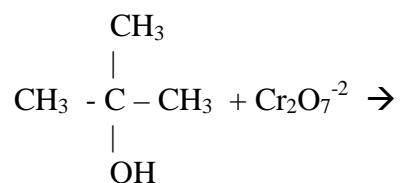




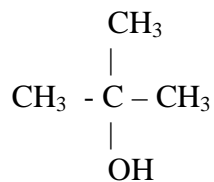
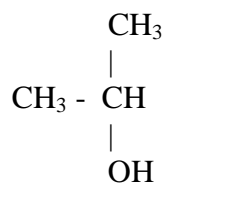
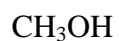




10. Predict the organic product for the following reactions.



11. What color change does one observe when acidified dichromate reacts with an alcohol?
12. Which of the following compounds will react with acidified dichromate solution?



13. Write the proper name of each of the following phenols.



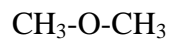






14. Write out the equation for the reaction of phenol with water.

15. Which of the following compounds will react with FeCl_3 to produce a purple color?



Alcohol, Phenol, Ether Problems – Page 6

16. Label each of the following ethers as either aliphatic or aromatic.



17. Name each of the following ethers.

