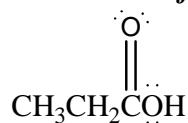
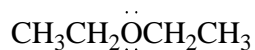


**CHEM 201**  
**Quiz # 1**  
**Chapter 1: Atoms and Molecules**

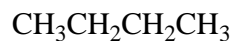
1. Arrange the following compounds according to increasing solubility in water, *least soluble first*:



(a)



(b)

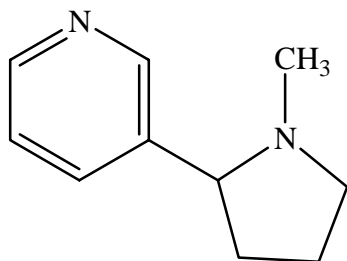


(c)



(d)

2. Convert the following polygon formula of nicotine into *empirical*, *molecular* and *structural* formulas:



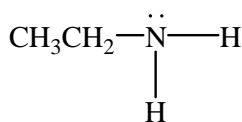
Nicotine

(a) Empirical formula:

(b) Molecular formula:

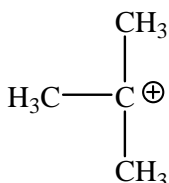
(c) Complete structural formula:

3. Classify each of the following compounds as Lewis acid or Lewis base:



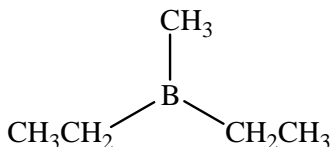
(a)

-----



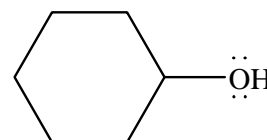
(b)

-----



(c)

-----



(d)

-----

4. Circle the most acidic compound in each of the followings:

(a)  $\text{H}-\text{Cl}$  or  $\text{H}-\text{Br}$  or  $\text{CH}_3\text{CH}_2\text{OH}$  or  $\text{CH}_3\text{CH}_2\text{NH}_2$

(b) or or