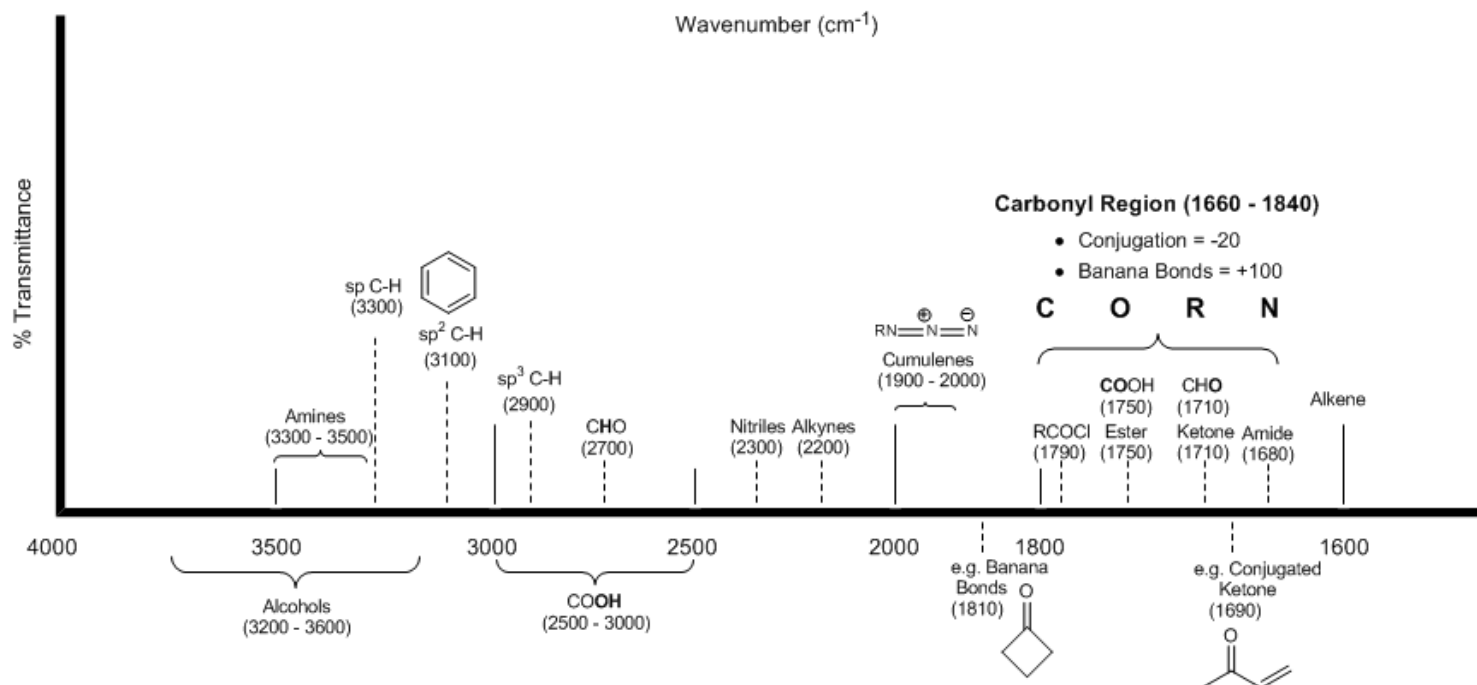
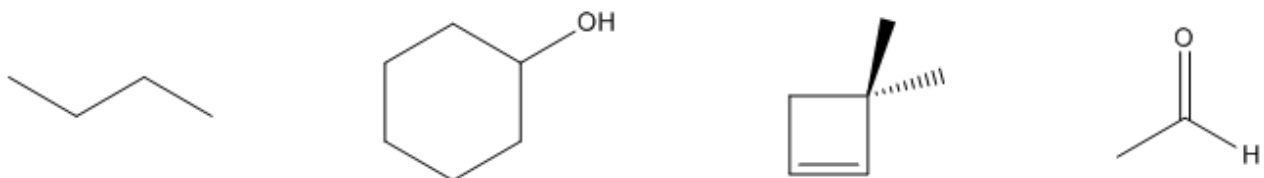


## CONCEPT: IR SPECTROSCOPY- FREQUENCIES

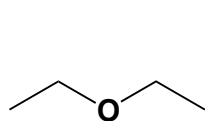
- There are specific *absorption frequencies* in the functional group region that we should be familiar with



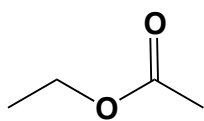
**EXAMPLE:** What are the major IR absorptions for each compounds?



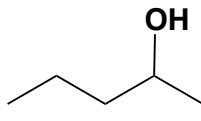
PRACTICE: Answer each of the following questions based on the images below.



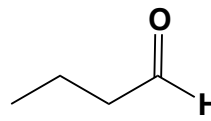
**A**



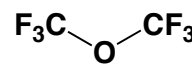
**B**



**C**



**D**



**E**

a) Which compounds show an intense peak  $\sim 1700\text{ cm}^{-1}$ ?

b) Which compound shows an intense, broad peak at  $\sim 3400\text{ cm}^{-1}$ ?

c) Which compound has a peak at  $\sim 1700\text{ cm}^{-1}$ , but no peaks at  $2700\text{ cm}^{-1}$ ?

d) Which compound has no signal beyond the fingerprint region?

PRACTICE: The following compound contains two carbonyl groups. Identify which carbonyl group will exhibit a signal at a lower wavenumber.

