## **CONCEPT: INTRODUCTION TO CONJUGATION**

Conjugation exists when three or more atoms with the ability to resonate are adjacent to each other (overlapping).

- Conjugation provides an electron "highway" to \_\_\_\_\_\_ from one side of the molecule to the other.
- Conjugated molecules display unique chemical reactivity. The higher the conjugation, the \_\_\_\_\_ the UV wavelength.

**EXAMPLE:** Which of the following molecules exists in a conjugated state?

$$H_2C$$
 $CH_3$ 
 $CH_3$ 
 $CH_2$ 
 $CH_2$ 

Allylic carbocations, carbanions, and radicals are <u>unusually stable</u> due to \_\_\_\_\_\_