Practice Questions

Practice Question 1

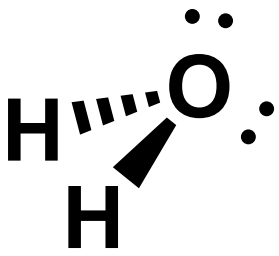
Practice
Use valence bond theory to depict bond formation in the following cases

N_2

$(C{\equiv}N)^-$

Practice Question 2

Use Valence Bond Theory and hybridization to predict the bonding in H_2O molecule

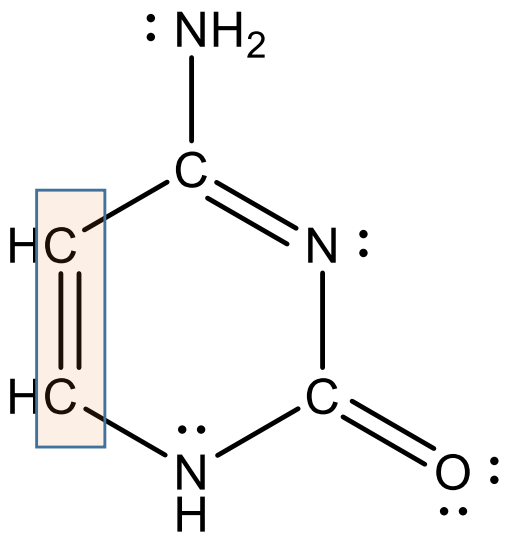


Practice Question 3

1. Draw the Lewis structure for CH_3CCH.
2. Predict the VSEPR geometry at each of the carbons.
3. Determine a hybridization scheme to rationalize the geometry of the bolded carbons CH_3**CC**H.
4. Identify the orbitals involved in each bond.

Practice Question 4

In this given structure, determine the orbitals (using Valence bond theory + hybridization) involved in bonding between the highlighted atoms



Practice Question 5

1. Draw the Lewis structure for $[CH_2CHCH_2]^+$
2. Predict the VSEPR geometry at each of the carbons.
3. Determine a hybridization scheme at each carbon.
4. Identify the orbitals involved in each bond.

Practice Question 6

1. Draw the Lewis structure for XeF_4.
2. Predict the VSEPR geometry at xenon.
3. Determine a hybridization scheme to rationalize the geometry.