

## Quiz 1

1. a. Complete the following MO diagram for the molecule  $N_2$  by adding electrons to the appropriate orbitals, labeling the atomic orbitals, and labeling the molecular orbitals. Indicate the bond order of the molecule.
  
- b. If the highest energy electron is promoted(exited) to the first empty orbital, will the bond order increase, decrease, or stay the same (it might help to calculate the bond order in the excited molecule)?

