

6) (12 points) Draw the π -molecular orbitals of 1,3,5-hexatriene in order of increasing energy and indicate which is the HOMO and which is the LUMO. Show the orbital electron population in both the ground state and the excited state.

energy ↑

7) (14 points) Provide a mechanism for the following electrophilic aromatic substitution reaction using the curved arrow formalism.

