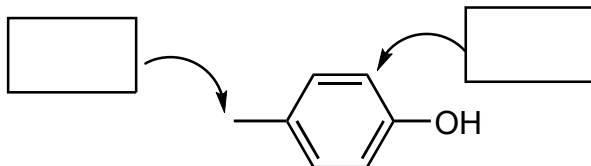


3A) (4 pts) Identify the hybridization of the indicated atoms (place answers in boxes).



3B) (2 pts) For the given compound, indicate your choice (A, B or C) for whether it involves:

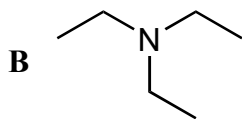
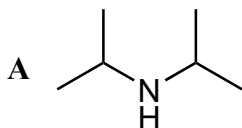
- A) covalent bonding only
B) ionic bonding only
C) both covalent and ionic bonding

HCl

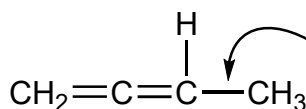
3C) (10 pts) Provide a complete Lewis structure for each of the following.



3D) (6 pts) Compound **A** is miscible with water, while compound **B** has limited solubility in water. **Explain** this difference in solubility, and **provide drawings** that show possible interactions each can have with water.



3E) (4 pts) Indicate the **type** of the designated bond (e.g., ionic, sigma, pi), and the **orbitals** that are overlapping to form it (e.g., s, p, sp, sp², sp³).



type?

orbitals?

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3F) (4 pts) Provide any missing lone pairs of electrons on the given line drawing (all existing formal charges are shown).

