Mechanisms Quiz #1  20 points  NAME:_____________________________

1-3) Draw Lewis structures (showing all hydrogens and including all lone pairs) for the following molecules:

![Lewis structures](image)

4-5) In the Ether above, what is the hybridization of the Oxygen, and hence what is the C-O-C bond angle?

6-8) Draw all the resonance structures for the following species, and draw curly arrows to show the electron reorganization.

![Resonance structures](image)
9-12) Indicate whether the pairs shown are tautomers or resonance structures.

13-14) Indicate whether the following molecules are aromatic or non-aromatic.
15-18) Identify the most acidic hydrogen in each molecule.

19) Circle the most basic atom in this molecule.

20) Identify the Nucleophile in this reaction.
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H₃C-\[\text{OH}\]
\[\text{NH}_2\]

19) Circle the most basic atom in this molecule.

20) Identify the Nucleophile in this reaction.

\[\text{Br-Br} \rightarrow \text{AlBr}_3 \rightarrow \text{Br-Br} + \text{Al-Br} \rightarrow \text{Br-Br} + \text{Al-Br} \rightarrow \text{Br-Br} + \text{Al-Br} \]

Mech-Q1

Page 3