

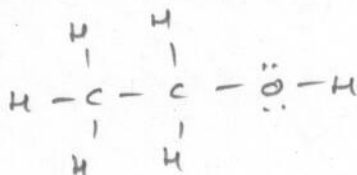
Quiz 2 (30 points)

Name Key

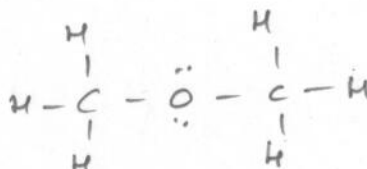
1. Consider the molecular formula C_2H_6O . (10 points)

- How many valence electrons are present?
- Draw a Lewis structure for this molecule (there is more than one). Show any lone pairs of electrons.

$$\begin{array}{r} 2 \text{ C} = 8 \\ 6 \text{ H} = 6 \\ 1 \text{ O} = 6 \\ \hline 20e^- \end{array}$$



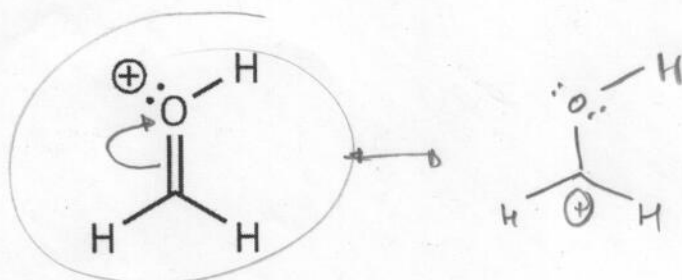
or



2
3.

Consider the structure shown below.

- Show the other resonance structure and use electron pushing to show how you arrived at it.
- Circle which form is the *major* form (the most reasonable).
- What is the hybridization of the oxygen atom?
- In the structure shown below, what type of atomic orbital is the lone pair of electrons in? (20 points)



more bond
means greater
of octets

c. sp^2

d. sp^2 (not a p-orbital, which is used for the π bond)