

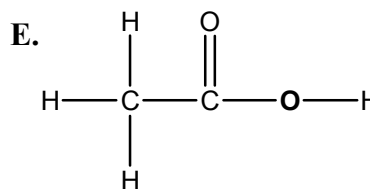
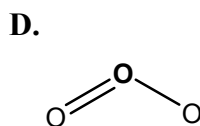
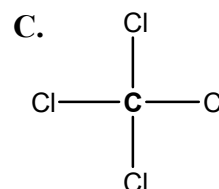
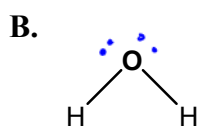
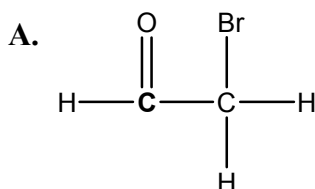
## Molecular Structure Ranking Tasks

Name: \_\_\_\_\_

Score: \_\_\_\_\_

### Hybridization I

One atom in each molecule below had been made bold. Rank the molecules from greatest to lowest hybridization per the following instructions. The value for any hybridization is the total number of orbitals involved in the hybridization. For example,  $sp^3$  hybridization would be given the value 4.



Greatest 1   B   2   C   3   E   4   A   5   D   Least

Explain your reasoning below.

A.  $\text{H}-\overset{\text{O}}{\parallel}{\text{C}}-\text{C}(\text{Br})(\text{H})-\text{H}$  has  $sp^2$  hybrids, so 3

B.  $\text{H}-\ddot{\text{O}}-\text{H}$  has  $sp^3$  hybrids, so 4

C.  $\text{C}(\text{Cl})_4$  has  $sp^3$ , so 4

D.  $\text{O}=\ddot{\text{O}}-\text{O}$  has  $sp^2$ , so 3

E.  $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$  has  $sp^3$ , so 4

Circle the response that best describes your confidence in your answer above.

(Basically Guessed) 1      2      3      4      5 (Positive you get it)