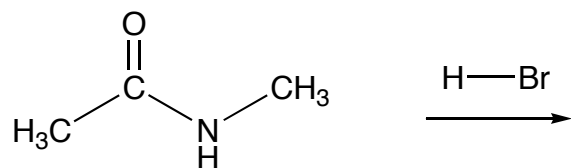


8. (4 pts) For formaldehyde, H_2CO , name the lowest energy electronic transition and the second lowest energy electronic transition.

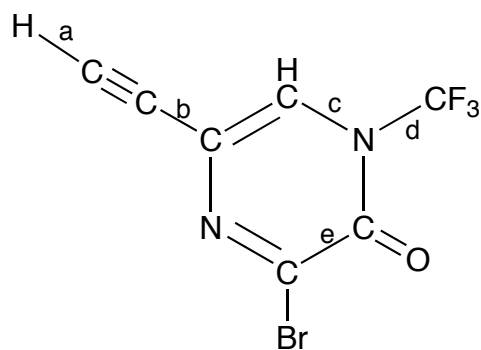
lowest energy electronic transition: _____

second lowest energy electronic transition: _____

9. (10 pts) Draw all the possible conjugate acids of the molecule below, **circle** the conjugate acid which is actually formed, and **explain (with additional structures and a sentence or two)** your pick.



10. (10 pts) Name the atomic orbitals which have overlapped to form the indicated bonds.



a: _____

b: _____

c: _____

d: _____

e: _____

END OF EXAM