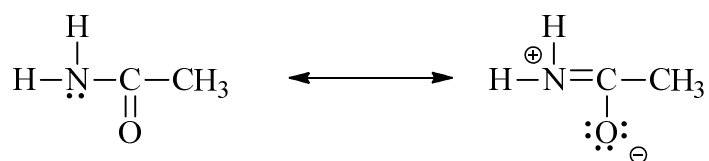


- The observed geometry of the N atom in H_2NCOCH_3 is trigonal planar. Draw a Lewis structure consistent with this observation and explain this observation.



The canonical form on the right is a significant contributor to the resonance stabilised molecule. The N atom in this structure is sp^2 hybridised with trigonal planar geometry.

This hybridisation means that the 'lone pair' is in a p -orbital on N and is able to become involved in π bonding with the $\text{C}=\text{O}$. This resonance acts to strengthen the N-C bond.