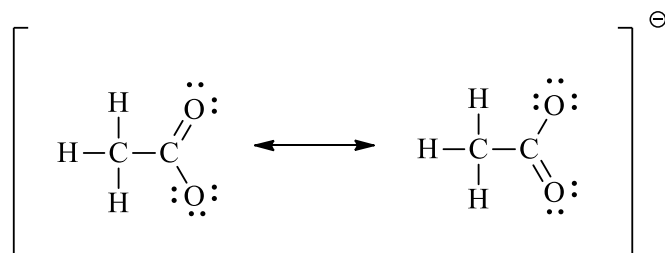


- Draw the Lewis structure of the acetate ion (CH_3COO^-) showing all appropriate resonance structures.

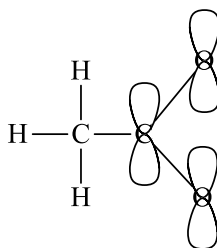
Marks
10



Indicate the hybridisation, molecular geometry and approximate bond angle about each of the carbon atoms in the acetate ion.

	$-\text{CH}_3$	$-\text{COO}^-$
Hybridisation of C	sp^3	sp^2
Molecular geometry about C	tetrahedral	trigonal planar
Approximate bond angles about C	109°	120°

The actual structure of the acetate ion is a weighted combination of all resonance structures. Sketch the σ -bond framework of the acetate ion and indicate the p -orbitals that are involved in the π -bonding of the acetate ion.



How many electrons are involved with the π -bonding?

4

What is the hybridisation of the oxygen atoms in the acetate ion?

sp^2