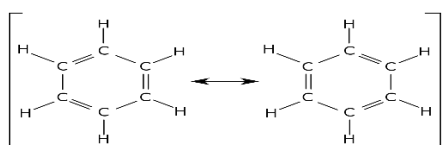


Taking suitable examples, describe briefly resonance and hybridization.  
 Predict the hybridization of each carbon in the acetate ion.

**Answer.**

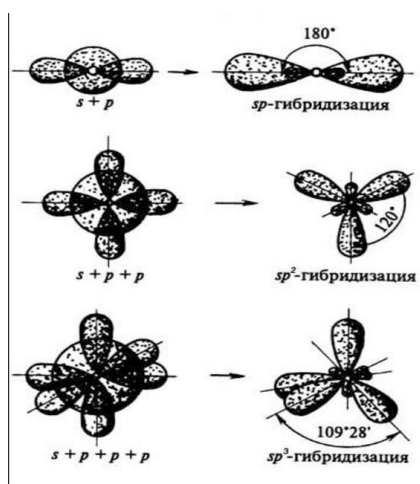
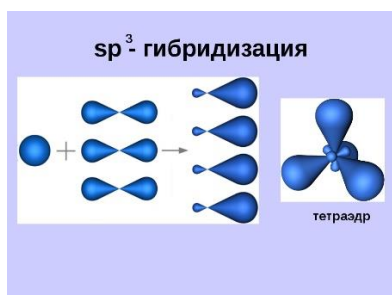
Resonance. It is a theory of electronic structure of molecules according to which the allocation of electrons in that molecule is a combination of some of its structures with different configuration of double bonds. None of the canonic structures exists, only their "resultant"

It happens due to the displacement of electron density.



Hybridization. It is a CONCEPT (not a real process) of mixing atomic orbitals into hybrid orbitals in which electrons can form a chemical bond. Hybrid orbitals have different shape from the original ones. Only orbitals for  $\sigma$ -bonds take part in hybridization,  $\pi$ -bonds orbitals are not taken into the account.

This model helps to explain molecular geometry of molecules



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