

## Part II Resonance Structures

Some molecules can be drawn with more than one lewis dot structure.

None of the lewis dot structure depicts the molecule accurately. **Resonance structures** are two or more electron dot structures for a molecule or ion that have the same arrangement of atoms.

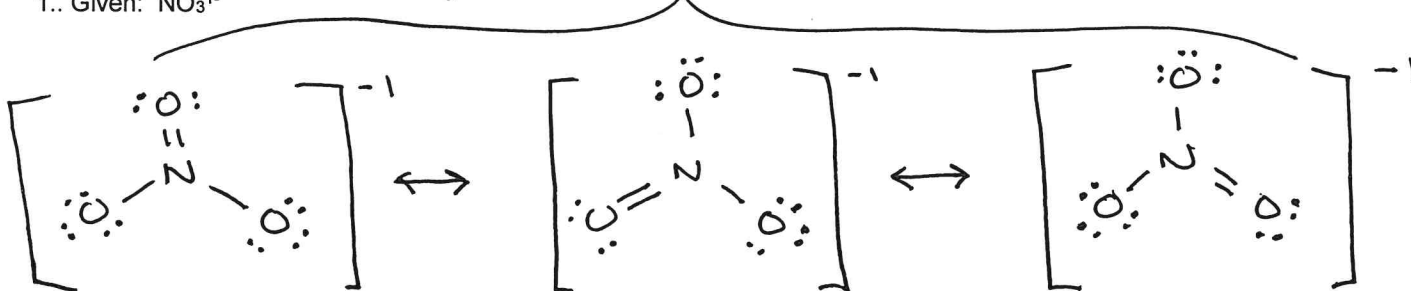
Ozone:

Experiments have shown that the two lewis dot structures are equivalent and that the bond strength characteristics are a hybrid of the two structures. The actual molecule is a **resonance hybrid** with two of the electrons being **delocalized** (spread over the entire molecule).

Examples:

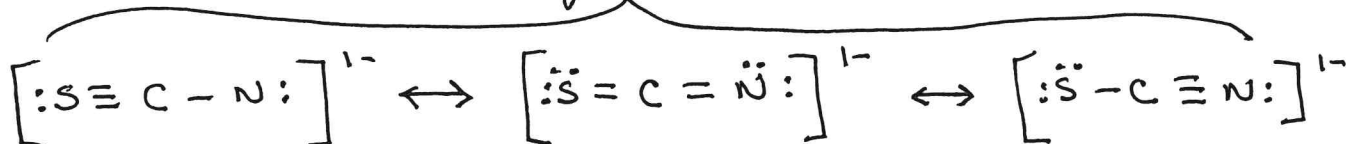
1.. Given:  $\text{NO}_3^-$

Equal resonance structures



2. Given:  $\text{SCN}^-$

unequal resonance structures



## Resonance Structures

