

## LECTURE 12 LEWIS DIAGRAMS

### I. Lewis Structures

- A. Example 1: Cyanide Ion  $\text{CN}^-$
- B. Example 2: Thionyl Chloride  $\text{SOCl}_2$

### II. Formal Charge

- A. Assigning a formal charge to an atom
- B. Significance
- C. Formal charge vs. Oxidation number

### III. Skeletal Structure

- A. Methyl groups
- B. Chain molecules

### IV. Resonance

- A. Example:  $\text{NO}_3^-$
- B. Resonance hybrid