

## Lewis Structure Review

### Additional Questions Asked:

1. Structure
  - a. VSEPR shape
  - b. Bond angle
    - i. Same plane
  - c. Polarity
  - d. Formal Charge
  - e. Hybridization
  - f. Identify the hydrogen atom that most readily reacts with a base.
2. IMF
  - a. Which IMF are present?
    - i. Which IMF explains differences in boiling?
    - ii. Which would be more soluble in water?
  - b. Comparisons
    - i. Highest Boiling Point
    - ii. Highest Equilibrium Vapor Pressure
    - iii. % Ionization

### Structure List from Exams 2019-2024

Name, Formula	Lewis Dot Structure	Additional Questions
Butanal, C <sub>4</sub> H <sub>8</sub> O		2bi.
Pentane, C <sub>5</sub> H <sub>12</sub>		2bi.
Propanoic acid, C <sub>3</sub> H <sub>6</sub> O <sub>2</sub>		
Methanol, CH <sub>3</sub> OH		

Bromine monofluoride, BrF		
Carbon disulfide, CS <sub>2</sub>		
Boron trifluoride, BF <sub>3</sub>		
Ethanol, C <sub>2</sub> H <sub>6</sub> O		
Ethane, C <sub>2</sub> H <sub>6</sub>		
Propanol, C <sub>3</sub> H <sub>8</sub> O		
Dimethyl ether, CH <sub>3</sub> OCH <sub>3</sub>		
Sulfur trioxide, SO <sub>3</sub>		

Diaminomethanal, $\text{H}_2\text{NCONH}_2$		
$\text{X-CH}_2\text{COOH}$ , where X is a halogen		
Glycinium, $\text{C}_2\text{H}_6\text{NO}_2^+$		
$\text{NH}_2\text{CH}_2\text{COO}^- \text{Na}^+$		
Dichloroethene, $\text{C}_2\text{H}_2\text{Cl}_2$		
Formic acid, $\text{CHOOH}$		
Carbon monoxide, $\text{CO}$		
Chloramine, $\text{NH}_2\text{Cl}$		

Nitrogen trichloride, $\text{NCl}_3$		
Oxalate ion, $\text{C}_2\text{O}_4^{-2}$		
Aluminum chloride, $\text{AlCl}_3$		
Lactic acid, $\text{C}_3\text{H}_6\text{O}_3$		
Nitrogen dioxide, $\text{NO}_2$		
Nitronium ion, $\text{NO}_2^+$		