

LIZARDI BHI	2008-09	Topics: Chemical Bonding Nomenclature	Marks:
Physics and Chemistry			
1st. term			
2008 - XI - 25			
NAME:			

1. Examine the next molecules: CO_2 , SO_2 , SO_3 , H_2O , NH_3 and CHCl_3 determining the following aspects:

- Lewis structure
- Shape and angles
- Polarity
- Intermolecular forces

Draw independent pictures to show those aspects (4 pictures per molecule)

Electronegativities: C=2.5; O=3.5; S=2.5; H=2.1; N=3.0; Cl=2.8

3 points

2. Given the elements shown in the periodic table

- determine the type of compound that results from the combination of B and C (Lewis structure and formula) and the following properties:
 - mechanical properties
 - melting point (high / low) and physical state
 - electric properties
- determine the type of compound that results from the combination of A and D (Lewis and formula) and the following properties:
 - melting point (high / low) and physical state
 - electric properties

2 points

3. Fill in the gaps in this table:

5 points

Formula	Lewis structure	Name
FeCl_3		
		Sulfuric acid
		Calcium fluoride
		Sulfur trioxide
H_2O		
		Potassium carbonate
KOH		
HNO_3		

Formula	Lewis structure	Name
		Magnesium oxide
KClO ₃		
		Hydrochloric acid
CaHBO ₃		
		Carbonic acid
		Calcium hydroxide
		Sodium nitrite
H ₂ SO ₃		
		Calcium sulfide

Formula	Lewis structure	Name
		Aluminum sulfate
CuO		
		Metaphosphoric acid
		Iron (II) hydroxide
		Hydrogen sulfide
CO		
		Ammonia
		Ammonium orthophosphate