

Multiple Choice (40 pts) -

- Change that is easily reversible is classified as _____ change.
 a. Physical
b. Chemical
c. Nuclear
d. Atomic
- The shape of an apple is a _____.
 a. Physical Property
b. Chemical Property
c. Physical Change
d. Chemical Change
- An example of a chemical property is the _____.
 a. Reaction of iron in the presence of oxygen
b. Tendency of water to exist as a gas at temperatures above 100°C
c. Smooth texture of an apple when touched
d. Color of an orange
- Examples of a physical change include all of the following EXCEPT:
a. Folding a piece of paper
b. Melting ice
c. Dissolving salt in water
 d. Burning a piece of paper
- Fireworks exploding are an example of a(n) _____.
 a. Chemical Change
b. Chemical Property
c. Physical Property
d. Physical Change
- A chemical bond forms when atoms transfer or share _____.
 a. Electrons
b. Protons
c. Ions
d. Neutrons
- A chemical bond that occurs when atoms share electrons is a(n) _____ bond.
 a. Covalent
b. Magnetic
c. Polyatomic
d. Ionic
- Covalent bonding occurs _____.
 a. When electrons are shared between two atoms
b. Only when electrons are shared between two identical atoms
c. In compounds like NaBr
d. When electrons are transferred from one atoms to another
- Ionic bonding occurs _____.
a. Only when electrons are shared between two metals
b. In compounds like SCl_2
c. When electrons are shared between two atoms
 d. When electrons are transferred from cations to anions
- What bonds are holding together the compound CaSO_4 ?
a. Metallic
b. Polar
c. Ionic
d. Covalent
- Which compound is most likely formed using covalent bonds?
a. KBr
b. K_2O
c. SiO_2
d. CaBr_2

Fill in the Blank (12 pts) -

Element	# of Valence Electrons	Electron (Lewis) Dot Structure
25. Li	1	Li [•]
26. Si	4	•Si•
27. Se	6	•Se•
28. F	7	•F•
29. Mg	2	Mg•
30. Xe	8	•Xe•

Short Answer - Naming Compounds [Ionic & Covalent] (16 pts) -

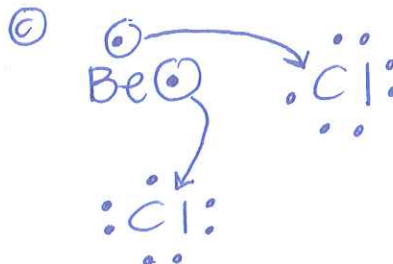
31. P₄S₅ Tetraphosphorus
Penta sulfide35. Pb₂O₄ Lead oxide32. N₂O₆ Dinitrogen
Hexoxide36. LiCl Lithium chloride33. SCl₄ Sulfur Tetrachloride37. CaSO₄ calcium Sulfate34. B₂Si Diboron Monosilicide38. Ca(ClO₃)₂ Calcium chlorate

Short Answer - Drawing & Identifying Bonds (20 pts) -

39. Answer the following questions about **beryllium** bonding with **chlorine**

- Write the type of bond that will occur between these two elements
- Label each element with its oxidation number
- Show how that exchange or share electrons in a bond to create a compound, using the electron dot diagrams of each element
- Write the completed formula of the compound
- Give the name of the compound

Ⓐ Ionic

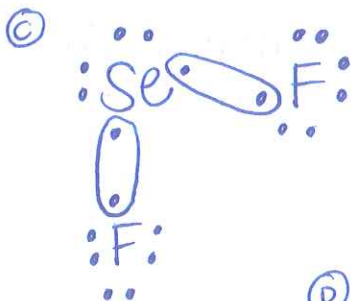
Ⓑ $\text{Be}^{2+} \text{Cl}^{-}$ Ⓓ BeCl_2

Ⓔ Beryllium chloride

40. Answer the following questions about **selenium** bonding with **fluorine**

- Write the type of bond that will occur between these two elements
- Label each element with its oxidation number
- Show how that exchange or share electrons in a bond to create a compound, using the electron dot diagrams of each element
- Write the completed formula of the compound
- Give the name of the compound

Ⓐ Covalent

Ⓑ $\text{Se}^{2-} \text{F}^{-}$ 

F - Se - F
[optional]

Ⓓ SeF_2

Ⓔ Selenium difluoride