

Unit 2 – Chapters 8,9

Name _____

Assignment #1

Period _____

1) Which compound in each of the following pairs of ionic substances has the most exothermic lattice energy? Justify your answers.

- a. LiF, CsF
- b. NaBr, NaI
- c. BaCl₂, BaO
- d. Na₂SO₄, CaSO₄
- e. KF, K₂O
- f. Li₂O, Na₂S

2) Write the Lewis structures that obey the octet rule for each of the following.

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|----------------------|---------------------------------|--------------------|
| a. HCN | d. NH ₄ ⁺ | g. CO ₂ |
| b. PH ₃ | e. H ₂ CO | h. O ₂ |
| c. CHCl ₃ | f. SeF ₂ | i. HBr |

***Except for HCN and H₂CO, the first atom listed is the central atom. For HCN and H₂CO₃, carbon is the central atom.**

3) Write Lewis structures and predict whether each of the following is polar or nonpolar.

- a. HOCN (exists as HO-CN)
- b. COS
- c. XeF₂
- d. CF₂Cl₂
- e. SeF₆
- f. H₂CO (C is the central atom)