**HomeWork 15**

**Due Monday 4 Dec**

**Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/20**

**1. Provide the correct , abbreviated electron configuration for: (1 pt each)**

**a) Mg**

**b) S**

**2. For the transition elements below, provide the correct abbreviated, d-switched**

 **and preferred filled/half-filled/empty electronic configurations: (2 pts ea/6 pts total)**

**a) Cr**

**b) Fe3+**

**c) V**

**3. Use the simple octet rule to predict the bonding and lone pairs for the molecules**

 **below: If present, indicate formal charges on any relevant atomic sites. (2 pts ea/6 pts total)**

 **SiO2 PCl3 NO2-**

**4. Predict the most likely Lewis structure for the molecules below where the octet**

 **rule can be broken to minimize formal charge. Include all lone pairs and if present, formal**

 **charges. (2 pts each/6 pts total)**

 **SO32-  AsF5 POCl3**

**(P in the middle With O and Cl attached to P only)**