

Name: _____

Date: _____

Chemistry 30 – Electrons and Molecular Forces Practice Test

- Write the electron configuration and noble gas configuration for the following elements:
 - Mn
 - Xe
- Use the noble gas configuration of selenium to:
 - Determine the number of valence electrons in one atom
 - Draw the Lewis diagram for selenium
 - Determine the charge of selenium when it becomes an ion
- Which element has the same electron configuration as a:
 - Bromide ion?
 - Potassium ion?
- Draw the Lewis structure for NO_2^- .
- The type of bond between phosphorus and chlorine is polar covalent.
 - Explain why, using electronegativity.
 - Explain why, using atomic radius.
 - Identify the dipoles.
- A white solid dissolves in water and has a very high melting point. Explain how you know what type of intramolecular forces are present.
- Use the Lewis structure and VSEPR shape to determine what type of intermolecular forces are present in:
 - SO_2
 - CO_2
 - PCl_5
- Which substance would you expect to have a higher boiling point: CH_4 or NH_3 ? Explain why.
- Which gas would be more likely to dissolve in water, oxygen gas or hydrogen chloride gas? Explain why.
- Why is hexane (C_6H_{14}) a liquid at room temperature while ethane (C_2H_6) is a gas?