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Semester One Final Exam Free Response (A)

1. Explain hydrogen bonding and what main two factors contribute to the strength of this bond. Draw a picture of how three water molecules would orient themselves if placed in the same container.
2. Given the following: determine based on periodic laws which circle represents: cesium atom, cesium ion, rubidium atom, rubidium ion. Assign each circle the correct name.

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1. Put the following in order of increasing atomic radius:

Ga, P, Sr, O

1. Explain how ions form. Use lithium and sulfide as examples. Identify which will become a cation and which will become an anion. Identify the amount of electrons gained/lost for each.
2. Write the electron configuration for calcium the ion.
3. Which group of elements in the Periodic Table is known as the Alkali Earth Metals?
4. Draw a Lewis Dot Structure for SiCl4. Explain how the octet rule is fulfilled.
5. Explain how ions are held together in an ionic bond. Give an example of an ionic bond.
6. About what percentage of the periodic table is classified as metals?
7. Draw a Lewis Dot structure of ammonia, NH3 and indicate if the bond is polar or nonpolar.