

- 1) Choose four elements from rows 2 and 3 and write their isoelectric ionic structure.
- 2) Which of the following are isoelectric atoms/ions?
 O^+ , Ar, S^{2-} , Ne, Zn, Cs^+ , N^{3-} , As^{3+} , N, Xe
- 3) Consider an element X. What will happen to the ionic radii for the following ions? Give a reasonable explanation to your answer.
- a) If it is X^{2+}
- b) If it is X^{3-}
- 4) Circle the larger of the ions in the following pairs:
- a) Cl or Cl^- b) Na or Na^+ c) Mg^{2+} or Al^{3+} d) Se^{2-} or Te^{2-}
- 5) Arrange in increasing order of atomic radii:
- a) Be, Mg, Ba b) Al, Si, Ge c) N^{3-} , O^{2-} , F^-
- d) Tl^{3+} , Tl^{2+} , Tl^+ e) K^+ , P^{3-} , S^{2-} , Cl^-
- 6) Circle the element that has a higher ionization energy:
- Cl or Na Mg^{2+} or Mg Cl or Br P or Se
- 7) Identify the element that has the highest and lowest energy?
Rb, Mg, I, As, F
- 8) Identify the element that has the highest and lowest electron affinity.
S, P, Ga, Li, Cl
- 9) Label the following as acidic or basic oxides.
- P_4O_{10} MgO Fe_2O_3 K_2O Cr_2O_3