

General Chemistry Multiple Choice Questions Chapter 4

1 Why are the noble gases considered to be unreactive?

- a They have high values of electronegativity
- b They are very large molecules
- c They have stable, full outer shells of electrons
- d They are very small molecules

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2 Why do metals always form ionic bonds with nonmetals?

- a They have very high electronegativity values
- b They are very large molecules
- c They have stable, full outer shells of electrons
- d They only loosely hold valence electrons

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3 What is the most metallic element on the Periodic Table?

- a Mercury
- b Francium
- c Polonium
- d Lead

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- 7 The table below shows the first ionization energy and atomic radius of several elements. Which of the following best helps to explain the deviation of the first ionization energy of oxygen from the overall trend?

Element	First Ionization Energy (kJ/mol)	Atomic Radius (pm)
B	801	85
C	1086	77
N	1400	75
O	1314	73
F	1680	72
Ne	2080	70

- a The atomic radius of oxygen is greater than the atomic radius of fluorine
- b The atomic radius of oxygen is less than the atomic radius of nitrogen
- c There is repulsion between paired electrons in oxygen's 2p orbitals
- d There is attraction between paired electrons in oxygen's 2p orbitals

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