1) Which statement identifies the element arsenic?

A) Arsenic has an atomic number of 33.
B) Arsenic has a melting point of 84 K.
C) An atom of arsenic in the ground state has eight valence electrons.
D) An atom of arsenic in the ground state has a radius of 146 pm.

2) Which list of elements contains a metal, a metalloid, and a nonmetal?

A) Zn, Ga, Ge
B) Si, Ge, Sn
C) Cd, Sb, I
D) F, Cl, Br

3) The elements in Period 5 on the Periodic Table are arranged from left to right in order of

A) decreasing atomic mass
B) decreasing atomic number
C) increasing atomic mass
D) increasing atomic number

4) Most of the groups in the Periodic Table of the Elements contain

A) nonmetals, only
B) metals, only
C) nonmetals and metals
D) metals and metalloids

5) On the Periodic Table, an element classified as a semimetal (metalloid) can be found in

A) Period 6, Group 15
B) Period 2, Group 14
C) Period 3, Group 16
D) Period 4, Group 15

6) The properties of elements are periodic functions of their

A) mass numbers
B) atomic masses
C) atomic radii
D) atomic numbers

7) Which three groups of the Periodic Table contain the most elements classified as metalloids (semimetals)?

A) 1, 2, and 13
B) 2, 13, and 14
C) 14, 15, and 16
D) 16, 17, and 18

8) The elements of the Periodic Table are arranged in horizontal rows according to each successive element's greater

A) atomic mass
B) atomic radius
C) number of protons
D) number of neutrons

9) Metallic substances will conduct electricity in

A) the solid phase, only
B) the liquid phase, only
C) both the solid and the liquid phase
D) neither the solid nor the liquid phase

10) Which property is generally characteristic of metallic elements?

A) low electrical conductivity
B) high heat conductivity
C) existence as brittle solids
D) existence as molecular solids

11) Which is a property of most nonmetallic solids?

A) high thermal conductivity
B) high electrical conductivity
C) brittleness
D) malleability

12) Which properties are characteristic of non-metals?

A) low thermal conductivity and low electrical conductivity
B) low thermal conductivity and high electrical conductivity
C) high thermal conductivity and low electrical conductivity
D) high thermal conductivity and high electrical conductivity

13) Pure silicon is chemically classified as a metalloid because silicon

A) is malleable and ductile
B) is an excellent conductor of heat and electricity
C) exhibits metallic and nonmetallic properties
D) none of the above

14) Based on the Periodic Table, explain why Na and K have similar chemical properties.