Name: **MC Practice #7**

1. Which set of values represents standard pressure and standard temperature?

   (1) 1 atm and 101.3 K
   (2) 1 kPa and 273 K
   (3) 101.3 kPa and 0°C
   (4) 101.3 atm and 273°C

2. Which statement about one atom of an element identifies the element?

   (1) The atom has 1 proton.
   (2) The atom has 2 neutrons.
   (3) The sum of the number of protons and neutrons in the atom is 3.
   (4) The difference between the number of neutrons and protons in the atom is 1.

3. A substance is classified as either an element or a

   (1) compound
   (2) solution
   (3) heterogeneous mixture
   (4) homogeneous mixture

4. A solid element that is malleable, a good conductor of electricity, and reacts with oxygen is classified as a

   (1) metal (2) metalloid
   (3) noble gas (4) nonmetal

5. Three forms of energy are

   (1) chemical, exothermic, and temperature
   (2) chemical, thermal, and electromagnetic
   (3) electrical, nuclear, and temperature
   (4) electrical, mechanical, and endothermic

6. What is the total amount of heat required to vaporize 1.00 gram of $H_2O(\ell)$ at 100.°C and 1 atmosphere?

   (1) 4.18 J (2) 334 J
   (3) 373 J (4) 2260 J

7. What is required for a chemical reaction to occur?

   (1) standard temperature and pressure
   (2) a catalyst added to the reaction system
   (3) effective collisions between reactant particles
   (4) an equal number of moles of reactants and products

8. Which compound is soluble in water?

   (1) PbS (2) BaS
   (3) Na_2S (4) Fe_2S_3

9. Compared to a 26-gram sample of NaCl(s) at STP, a 52-gram sample of NaCl(s) at STP has

   (1) a different density
   (2) a different gram-formula mass
   (3) the same chemical properties
   (4) the same volume

10. A gas changes directly to a solid during

    (1) fusion (2) deposition
    (3) saponification (4) decomposition