Practice Final Spring 2016

Multiple Choice
Identify the choice that best completes the statement or answers the question.

_____ 1. What is the name of the ionic compound formed from lithium and bromine?
    a. lithium bromine   c. lithium bromium
    b. lithium bromide   d. lithium bromate

_____ 2. Mercury can be obtained by reacting mercury(II) sulfide with calcium oxide. How many grams of calcium oxide are needed to produce 36.0 g of Hg?
$4HgS(s) + 4CaO(s) \rightarrow 4Hg(l) + 3CaS(s) + CaSO_4$
    a. 1.80 g   c. 10.1 g
    b. 7.56 g   d. 13.4 g

_____ 3. If sulfur dioxide and oxygen can be made into sulfur trioxide, what is the reverse reaction?
    a. $2SO_3 \rightarrow 2SO_2 + O_2$ c. $2SO_2 + O_2 \rightarrow 2SO_3$
    b. $SO_3 + O_2 \rightarrow SO_5$ d. $SO_2 + 2SO_3 \rightarrow 3S + 4O_2$

_____ 4. Which of the following elements can form diatomic molecules held together by triple covalent bonds?
    a. carbon   c. fluorine
    b. oxygen   d. nitrogen

_____ 5. If the hydrogen ion concentration of a solution is $10^{-10}M$, is the solution acidic, alkaline, or neutral?
    a. acidic   c. neutral
    b. alkaline   d. The answer cannot be determined.

_____ 6. When the name of an anion that is part of an acid ends in *-ite*, the acid name includes the suffix ____.
    a. *-ous*   c. *-ate*
    b. *-ic*   d. *-ite*

_____ 7. In a particular reaction between copper metal and silver nitrate, 12.7 g Cu produced 38.1 g Ag. What is the percent yield of silver in this reaction?
$Cu + 2AgNO_3 \rightarrow Cu(NO_3)_2 + 2Ag$
    a. 56.7%   c. 88.2%
    b. 77.3%   d. 176%

_____ 8. When an acid reacts with a base, what compounds are formed?
    a. a salt only   c. metal oxides only
    b. water only   d. a salt and water

_____ 9. Which of the following CANNOT be classified as a substance?
    a. table salt   c. nitrogen
    b. air   d. gold

_____ 10. Why does a catalyst cause a reaction to proceed faster?
    a. There are more collisions per second only.
    b. The collisions occur with greater energy only.
    c. The activation energy is lowered only.
    d. There are more collisions per second and the collisions are of greater energy.

_____ 11. In which of the following groups of ions are the charges all shown correctly?
    a. Li^-, O^{2-}, S^{2+} c. K^{2-}, F^-, Mg^{2+}
    b. Ca^{2+}, Al^{3+}, Br^- d. Na^+, I^-, Rb^-

_____ 12. Which of the following factors contributes to the increase in ionization energy from left to right across a period?
    a.   an increase in the shielding effect
    b.   an increase in the size of the nucleus
    c.   an increase in the number of protons
    d.   fewer electrons in the highest occupied energy level

_____ 13. If you rewrite the following word equation as a balanced chemical equation, what will the coefficient and symbol for fluorine be?
nitrogen trifluoride $\rightarrow$ nitrogen + fluorine
    a. $6F_2$ c. $6F$
    b. F_3 d. $3F_2$

_____ 14. What symbol is used for beta radiation?
    a. ${}^{0}_{0}e$ c. ${}^{-1}_{0}e$
    b. ${}^{0}_{-1}e$ d. ${}^{-1}_{-1}e$

_____ 15. Which of the following was originally a tenet of Dalton's atomic theory, but had to be revised about a century ago?
    a.   Atoms are tiny indivisible particles.
    b.   Atoms of the same element are identical.
    c.   Compounds are made by combining atoms.
    d.   Atoms of different elements can combine with one another in simple whole number ratios.

_____ 16. What is the correct formula for calcium dihydrogen phosphate?
    a. CaH_2PO_4 c. $Ca(H_2PO_4)_2$
    b. $Ca_2H_2PO_4$ d. $Ca(H_2HPO_4)_2$

_____ 17. When the following equation is balanced, what is the coefficient for HCl?
$Mg(s) + HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$
    a.   6   c.   1
    b.   3   d.   2

_____ 18. How many electrons does barium have to give up to achieve a noble-gas electron configuration?
    a.   1   c.   3
    b.   2   d.   4

_____ 19. The shape of the methane molecule (CH_4) is called _____.
    a.   tetrahedral   c.   four-cornered
    b.   square   d.   planar

_____ 20. Which of the following formulas represents a molecular compound?
    a.   ZnO   c. SO_2
    b.   Xe   d. BeF_2

_____ 21. Which of the following usually makes a substance dissolve faster in a solvent?
    a.   agitating the solution
    b.   increasing the particle size of the solute
    c.   lowering the temperature
    d.   decreasing the number of particles

_____ 22. What is the best description for a solution with a hydroxide-ion concentration of $1 \times 10^{-4} M$?
    a.   acidic   c.   neutral
    b.   basic   d.   The answer cannot be determined.

____ 23. What is the electron configuration of potassium?
     a. $1s^2 2s^2 2p^2 3s^2 3p^2 4s^1$ c. $1s^2 2s^2 3s^2 3p^6 3d^1$
     b. $1s^2 2s^2 2p^{10} 3s^2 3p^3$ d. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$

____ 24. In an endothermic reaction at equilibrium, what is the effect of raising the temperature?
     a.   The reaction makes more products.   c.   The reaction is unchanged.
     b.   The reaction makes more reactants.   d.   The answer cannot be determined.

____ 25. How do the isotopes hydrogen-1 and hydrogen-2 differ?
     a.   Hydrogen-2 has one more electron than hydrogen-1.
     b.   Hydrogen-2 has one neutron; hydrogen-1 has none.
     c.   Hydrogen-2 has two protons; hydrogen-1 has one.
     d.   Hydrogen-2 has one proton; hydrogen-1 has none.

____ 26. Which of the following equals one atomic mass unit?
     a.   the mass of one electron
     b.   the mass of one helium-4 atom
     c.   the mass of one carbon-12 atom
     d.   one-twelfth the mass of one carbon-12 atom

____ 27. The molar mass of a gas can be determined from which of the following?
     a.   the density of the gas at STP   c.   Avogadro's number
     b.   the volume of a mole of the gas   d.   none of the above

____ 28. Which of the following is the correct name for N_2O_5?
     a.   nitrous oxide   c.   nitrogen dioxide
     b.   dinitrogen pentoxide   d.   nitrate oxide

____ 29. How many significant figures are in the measurement 0.003 4 kg?
     a.   two   c.   five
     b.   four   d.   This cannot be determined.

____ 30. As a consequence of the discovery of the nucleus by Rutherford, which model of the atom is thought to be true?
     a.   Protons, electrons, and neutrons are evenly distributed throughout the volume of the atom.
     b.   The nucleus is made of protons, electrons, and neutrons.
     c.   Electrons are distributed around the nucleus and occupy almost all the volume of the atom.
     d.   The nucleus is made of electrons and protons.

____ 31. The particles that are found in the nucleus of an atom are ____.
     a.   neutrons and electrons   c.   protons and neutrons
     b.   electrons only   d.   protons and electrons

____ 32. The diameter of a carbon atom is 0.000 000 000 154 m. What is this number expressed in scientific notation?
     a. 1.54×10^{12} m   c. 1.54×10^{10} m
     b. 1.54×10^{-12} m   d. 1.54×10^{-10} m

____ 33. How many energy sublevels are in the second principal energy level?
     a.   1   c.   3
     b.   2   d.   4

____ 34. The equation $H_3PO_4 + 3KOH \rightarrow K_3PO_3 + 3H_2O$ is an example of which type of reaction?
     a.   neutralization reaction   c.   decomposition reaction
     b.   combination reaction   d.   single-replacement reaction

_____ 35. Which of the following formulas represents an ionic compound?
    a. CS_2 c. N_2O_4
    b. BaI_2 d. PCl_3

_____ 36. What is transferred between a conjugate acid-base pair?
    a.   an electron   c.   a hydroxide ion
    b.   a proton   d.   a hydronium ion

_____ 37. Which of the following is an INCORRECT interpretation of the balanced equation shown below?
$2S(s) + 3O_2(g) \rightarrow 2SO_3(g)$

    a.   2 atoms S + 3 molecules O_2 → 2 molecules SO_3

    b.   2 g S + 3 g O_2 → 2 g SO_3

    c.   2 mol S + 3 mol O_2 → 2 mol SO_3

    d.   none of the above

_____ 38. Each period in the periodic table corresponds to _____.
    a.   a principal energy level   c.   an orbital
    b.   an energy sublevel   d.   a suborbital

_____ 39. Another name for the activated complex is _____.
    a.   energy barrier   c.   rate limiter
    b.   transition state   d.   collision group

_____ 40. If E is the symbol for an element, which two of the following symbols represent isotopes of the same element?

    1. $^{20}_{10}E$ 2. $^{20}_{11}E$ 3. $^{21}_{9}E$ 4. $^{21}_{10}E$

    a.   1 and 2   c.   1 and 4
    b.   3 and 4   d.   2 and 3

_____ 41. How many valence electrons are in a silicon atom?
    a.   2   c.   6
    b.   4   d.   8

_____ 42. Which of the following is NOT an example of matter?
    a.   air   c.   smoke
    b.   heat   d.   water vapor

_____ 43. Which of the following elements has the smallest first ionization energy?
    a.   sodium   c.   potassium
    b.   calcium   d.   magnesium

_____ 44. How do atoms achieve noble-gas electron configurations in single covalent bonds?
    a.   One atom completely loses two electrons to the other atom in the bond.
    b.   Two atoms share two pairs of electrons.
    c.   Two atoms share two electrons.
    d.   Two atoms share one electron.

_____ 45. Symbols used in equations, together with the explanations of the symbols, are shown below. Which set is correct?
    a.   (*g*), grams   c.   (*aq*), dissolved in water
    b.   (*l*), liters   d.   (*s*), solid product

_____ 46. Which of the following represents a Brønsted-Lowry conjugate acid-base pair?
   a. SO_3^{2-} and SO_2 c. H_3O and H_2
   b. CO_3^{2-} and CO d. NH_4^+ and NH_3

_____ 47. Which state of matter takes both the shape and volume of its container?
   a. solid   c. gas
   b. liquid   d. both b and c

_____ 48. If the temperature changes by 100 K, by how much does it change in °C?
   a. 0°C   c. 100°C
   b. 37°C   d. 273°C

_____ 49. Which of the following elements has the smallest atomic radius?
   a. sulfur   c. selenium
   b. chlorine   d. bromine

_____ 50. Isotopes of the same element have different _____.
   a. positions on the periodic table   c. atomic numbers
   b. chemical behavior   d. mass numbers

_____ 51. The acid dissociation constant for an acid dissolved in water is equal to the _____.
   a. equilibrium constant
   b. equilibrium constant times the concentration of water
   c. equilibrium constant divided by the concentration of water
   d. equilibrium constant times the equilibrium constant of water

_____ 52. Using the periodic table, determine the number of neutrons in ^{16}O.
   a. 4   c. 16
   b. 8   d. 24

_____ 53. What particle decomposes to produce the electron of beta radiation?
   a. proton   c. electron
   b. neutron   d. positron

_____ 54. Which expression represents a reaction rate?
   a. time/mass   c. energy/time
   b. number/time   d. time/energy

_____ 55. What are the coefficients that will balance the skeleton equation below?
   $AlCl_3 + NaOH \rightarrow Al(OH)_3 + NaCl$

   a. 1, 3, 1, 3   c. 1, 1, 1, 3
   b. 3, 1, 3, 1   d. 1, 3, 3, 1

_____ 56. Which of the following measurements is expressed to three significant figures?
   a. 0.007 m   c. 7.30×10^{-7} km
   b. 7077 mg   d. 0.070 mm

_____ 57. Which of the following elements has the smallest ionic radius?
   a. Li   c. O
   b. K   d. S

_____ 58. What is the number of moles of solute in 250 mL of a $0.4M$ solution?
   a. 0.1 mol   c. 0.62 mol
   b. 0.16 mol   d. 1.6 mol

_____ 59. How many moles of H_3PO_4 are produced when 71.0 g P_4O_{10} reacts completely to form H_3PO_4?

$P_4O_{10}(s) + 6H_2O(l) \rightarrow 4H_3PO_4(aq)$

    a.   0.063 5 mol   c.   4.00 mol
    b.   1.00 mol   d.   16.0 mol

_____ 60. When radium-226 (atomic number 88) decays by emitting an alpha particle, it becomes _____.

    a.   polonium-222   c.   radium-222
    b.   polonium-224   d.   radon-222

_____ 61. At equilibrium, what is the rate of production of reactants compared with the rate of production of products?

    a.   much higher   c.   the same
    b.   higher   d.   lower

_____ 62. Which of the following is the correctly balanced equation for the incomplete combustion of heptene, C_7H_{14}?

    a. $C_7H_{14} + 14O \rightarrow 7CO + 7H_2O$ c. $2C_7H_{14} + 21O_2 \rightarrow 14CO_2 + 14H_2O$

    b. $C_7H_{14} + 7O_2 \rightarrow 7CO + 7H_2O$ d. $C_7H_{14} + O_2 \rightarrow C_7O_2 + 7H_2$

_____ 63. What is the molarity of 200 mL of solution in which 2.0 moles of sodium bromide is dissolved?

    a. $2.0M$ c. $0.40M$
    b. $10M$ d. $4.0M$

_____ 64. How is the number of neutrons in the nucleus of an atom calculated?

    a.   Add the number of electrons and protons together.
    b.   Subtract the number of electrons from the number of protons.
    c.   Subtract the number of protons from the mass number.
    d.   Add the mass number to the number of electrons.

_____ 65. What mass of Na_2SO_4 is needed to make 2.5 L of $2.0M$ solution? (Na = 23 g; S = 32 g; O = 16 g)

    a.   178 g   c.   356 g
    b.   284 g   d.   710 g

_____ 66. What types of atomic orbitals are in the third principal energy level?

    a.   *s* and *p* only   c.   *s, p,* and *d* only
    b.   *p* and *d* only   d.   *s, p, d,* and *f*

_____ 67. Which of the following is a property of an acid?

    a.   sour taste   c.   strong color
    b.   nonelectrolyte   d.   unreactive

_____ 68. What type of ions have names ending in -*ide*?

    a.   only cations   c.   only metal ions
    b.   only anions   d.   only gaseous ions

_____ 69. When the equation $KClO_3(s) \rightarrow KCl(s) + O_2(g)$ is balanced, the coefficient of $KClO_3$ is _____.

    a.   1   c.   3
    b.   2   d.   4

_____ 70. What is true about the molar mass of chlorine gas?

    a.   The molar mass is 35.5 g.
    b.   The molar mass is 71.0 g.
    c.   The molar mass is equal to the mass of one mole of chlorine atoms.
    d.   none of the above

_____ 71. Which of the forces of molecular attraction is the weakest?

    a.   dipole interaction   c.   hydrogen bond
    b.   dispersion   d.   single covalent bond

____ 72. What is the effect of adding more water to the following equilibrium reaction?
$CO_2 + H_2O \rightleftharpoons H_2CO_3$
  a. More H_2CO_3 is produced.
  b. CO_2 concentration increases.
  c. The equilibrium is pushed in the direction of reactants.
  d. There is no effect.

____ 73. The products of self-ionization of water are ____.
  a. H_3O^+ and H_2O c. OH^+ and H^-
  b. OH^- and OH^+ d. OH^- and H^+

____ 74. All atoms are ____.
  a. positively charged, with the number of protons exceeding the number of electrons
  b. negatively charged, with the number of electrons exceeding the number of protons
  c. neutral, with the number of protons equaling the number of electrons
  d. neutral, with the number of protons equaling the number of electrons, which is equal to the number of neutrons

____ 75. The type of reaction that takes place when one element reacts with a compound to form a new compound and a different element is a ____.
  a. combination reaction   c. single-replacement reaction
  b. decomposition reaction   d. double-replacement reaction

____ 76. In a neutral solution, the $[H^+]$ is ____.
  a. $10^{-14} M$ c. $1 \times 10^7 M$
  b. zero   d. equal to $[OH^-]$

____ 77. The equation $2C_3H_7OH + 9O_2 \rightarrow 6CO_2 + 8H_2O$ is an example of which type of reaction?
  a. combustion reaction   c. double-replacement reaction
  b. single-replacement reaction   d. decomposition reaction

____ 78. Which is the most susceptible to damage from ionizing radiation?
  a. soft tissue   c. wood
  b. paper   d. lead

____ 79. Atomic size generally ____.
  a. increases as you move from left to right across a period
  b. decreases as you move from top to bottom within a group
  c. remains constant within a period
  d. decreases as you move from left to right across a period

____ 80. Select the correct formula for sulfur hexafluoride.
  a. S_2F_6 c. F_6S_2
  b. F_6SO_3 d. SF_6

____ 81. In which of the following sets is the symbol of the element, the number of protons, and the number of electrons given correctly?
  a. In, 49 protons, 49 electrons   c. Cs, 55 protons, 132.9 electrons
  b. Zn, 30 protons, 60 electrons   d. F, 19 protons, 19 electrons

____ 82. What is the quantity 0.0075 meters expressed in centimeters?
  a. 0.075 cm   c. 7.5 cm
  b. 0.75 cm   d. 70.5 cm

_____ 83. Which of the following is a physical change?
    a.   corrosion   c.   evaporation
    b.   explosion   d.   rotting of food

_____ 84. What is the electron configuration of the calcium ion?
    a. $1s^2 2s^2 2p^6 3s^2 3p^6$ c. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$
    b. $1s^2 2s^2 2p^6 3s^2 3p^4 4s^2$ d. $1s^2 2s^2 2p^6 3s^2$

_____ 85. Which of the following reactions illustrates amphoterism?
    a. $H_2O + H_2O \rightleftharpoons H_3O^+ + OH^-$ c. $HCl + H_2O \rightleftharpoons H_3O^+ + Cl^-$
    b. $NaCl \rightleftharpoons Na^+ + OH^-$ d. $NaOH \rightleftharpoons Na^+ + OH^-$

_____ 86. Which of the following correctly shows a prefix used in naming binary molecular compounds with its corresponding number?
    a.   *deca-*, 7   c.   *hexa-*, 8
    b.   *nona-*, 9   d.   *octa-*, 4

_____ 87. In which of the following is the number of neutrons correctly represented?
    a. $^{19}_{9}F$ has 0 neutrons.   c. $^{24}_{12}Mg$ has 24 neutrons.
    b. $^{75}_{33}As$ has 108 neutrons.   d. $^{238}_{92}U$ has 146 neutrons.

_____ 88. Iron(III) oxide is formed when iron combines with oxygen in the air. How many grams of Fe_2O_3 are formed when 16.7 g of Fe reacts completely with oxygen?
$4Fe(s) + 3O_2(g) \rightarrow 2Fe_2O_3(s)$
    a.   12.0 g   c.   47.8 g
    b.   23.9 g   d.   95.6 g

_____ 89. Consider the reaction $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$. What is the effect of decreasing the volume on the contained gases?
    a.   The reaction shifts toward the product gas.
    b.   The system reacts by increasing the number of gas molecules.
    c.   The pressure on the gases decreases momentarily.
    d.   Ammonia is consumed in the reaction.

_____ 90. What causes water molecules to have a bent shape, according to VSEPR theory?
    a.   repulsive forces between unshared pairs of electrons
    b.   interaction between the fixed orbitals of the unshared pairs of oxygen
    c.   ionic attraction and repulsion
    d.   the unusual location of the free electrons

_____ 91. This symbol ($\rightleftharpoons$) indicates that _____.
    a.   heat must be applied
    b.   an incomplete combustion reaction has occurred
    c.   a gas is formed by the reaction
    d.   the reaction is reversible

_____ 92. What is the electron configuration of the iodide ion?
    a. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6$
    b. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10}$
    c. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2$
    d. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6$

____ 93. The atomic mass of an element depends upon the ____.
   a.   mass of each electron in that element
   b.   mass of each isotope of that element
   c.   relative abundance of protons in that element
   d.   mass and relative abundance of each isotope of that element

____ 94. Lead nitrate can be decomposed by heating. What is the percent yield of the decomposition reaction if 9.9 g $Pb(NO_3)_2$ are heated to give 5.5 g of PbO?

$$2Pb(NO_3)_2(s) \rightarrow 2PbO(s) + 4NO_2(g) + O_2(g)$$

   a.   44%   c.   67%
   b.   56%   d.   82%

____ 95. What happens to a catalyst in a reaction?
   a.   It is unchanged.   c.   It is incorporated into the reactants.
   b.   It is incorporated into the products. d.   It evaporates away.

____ 96. Which of the following sets of symbols represents isotopes of the same element?
   a. $^{91}_{42}J$ $^{92}_{42}J$ $^{93}_{40}J$ c. $^{84}_{38}M$ $^{86}_{38}M$ $^{87}_{38}M$
   b. $^{50}_{19}L$ $^{50}_{20}L$ $^{50}_{21}L$ d. $^{138}_{59}Q$ $^{133}_{55}Q$ $^{133}_{54}Q$

____ 97. The charge on a gamma ray is ____.
   a.   +2   c.   0
   b.   +1   d.   −2

____ 98. Which of the following is a heterogeneous mixture?
   a.   air   c.   steel
   b.   salt water   d.   soil

____ 99. What is the charge on the hydronium ion?
   a.   2–   c.   0
   b.   2–   d.   1+

____ 100. Isotopes of the same element have different ____.
   a.   numbers of neutrons   c.   numbers of electrons
   b.   numbers of protons   d.   atomic numbers

____ 101. The equation $Mg(s) + 2HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$ is an example of which type of reaction?

   a.   combination reaction   c.   decomposition reaction
   b.   single-replacement reaction   d.   double-replacement reaction

____ 102. The atomic number of an element is the total number of which particles in the nucleus?
   a.   neutrons   c.   electrons
   b.   protons   d.   protons and electrons

____ 103. What is the molarity of a solution that contains 6 moles of solute in 2 liters of solution?
   a.   6*M*   c.   7*M*
   b.   12*M*   d.   3*M*

____ 104. Which of these elements does not exist as a diatomic molecule?
   a.   Ne   c.   H
   b.   F   d.   I

____ 105. Which of the following are considered physical properties of a substance?
   a.   color and odor   c.   malleability and hardness
   b.   melting and boiling points   d.   all of the above

____ 106. Which of the following statements correctly compares the relative size of an ion to its neutral atom?
   a.   The radius of an anion is greater than the radius of its neutral atom.
   b.   The radius of an anion is identical to the radius of its neutral atom.
   c.   The radius of a cation is greater than the radius of its neutral atom.
   d.   The radius of a cation is identical to the radius of its neutral atom.

____ 107. Which symbol is used for an alpha particle?
   a. $^{2}_{1}He$ c. $^{4}_{1}He$
   b. $^{2}_{2}He$ d. $^{4}_{2}He$

____ 108. The nucleus of an atom is ____.
   a.   the central core and is composed of protons and neutrons
   b.   positively charged and has more protons than neutrons
   c.   negatively charged and has a high density
   d.   negatively charged and has a low density

____ 109. A process that absorbs heat is a(n) ____.
   a.   endothermic process   c.   exothermic process
   b.   polythermic process   d.   ectothermic process

____ 110. When dissolved in water, acids produce ____.
   a.   negative ions   c.   hydrogen ions
   b.   polyatomic ions   d.   oxide ions

____ 111. What is thought to cause the dispersion forces?
   a.   attraction between ions   c.   sharing of electron pairs
   b.   motion of electrons   d.   differences in electronegativity

____ 112. The atomic mass of an element is the ____.
   a.   total number of subatomic particles in its nucleus
   b.   weighted average of the masses of the isotopes of the element
   c.   total mass of the isotopes of the element
   d.   average of the mass number and the atomic number for the element

____ 113. How many moles of tungsten atoms are in 4.8×10^{25} atoms of tungsten?
   a. 8.0×10^{2} moles   c. 1.3×10^{-1} moles
   b. 8.0×10^{1} moles   d. 1.3×10^{-2} moles

____ 114. What particle is needed to complete the following nuclear equation?
   $^{56}_{25}Mn \rightarrow$ ____ $+ \, ^{0}_{-1}e$
   a. $^{56}_{27}Co$ c. $^{56}_{26}Fe$
   b. $^{27}_{25}Mn$ d. $^{58}_{24}Cr$

____ 115. The least penetrating form of radiation is ____.
   a.   beta radiation   c.   alpha radiation
   b.   gamma radiation   d.   X rays

____ 116. What particle is emitted in alpha radiation?
   a.   electron   c.   helium nucleus
   b.   photon   d.   hydrogen nucleus

____ 117. Which of the following materials is necessary to stop an alpha particle?
   a.   three feet of concrete   c.   single sheet of aluminum foil
   b.   three inches of lead   d.   single sheet of paper

_____ 118. What is the volume, in liters, of 0.500 mol of C_3H_8 gas at STP?

    a.   0.0335 L   c.   16.8 L

    b.   11.2 L   d.   22.4 L

_____ 119. Which of the following correctly represents an ion pair and the ionic compound the ions form?

    a. $Ca^{2-}, F^-; CaF_2$ c. $Ba^{2+}, O^{2-}; Ba_2O_2$

    b. $Na^+, Cl^-; NaCl_2$ d. $Pb^{4+}, O^{2-}; Pb_2O_4$

_____ 120. Which of the following measurements contains two significant figures?

    a.   0.004 00 L   c.   0.000 44 L

    b.   0.004 04 L   d.   0.004 40 L

_____ 121. In a concentrated solution there is _____.

    a.   no solvent   c.   a small amount of solute

    b.   a large amount of solute   d.   no solute

_____ 122. Which of the following is true about homogeneous mixtures?

    a.   They are known as solutions.

    b.   They consist of two or more phases.

    c.   They have compositions that never vary.

    d.   They are always liquids.

_____ 123. What characterizes a strong acid or base?

    a.   polar covalent bonding

    b.   complete ionization in water

    c.   ionic bonding

    d.   presence of a hydroxide or hydrogen ion

_____ 124. What causes dipole interactions?

    a.   sharing of electron pairs

    b.   attraction between polar molecules

    c.   bonding of a covalently bonded hydrogen to an unshared electron pair

    d.   attraction between ions

_____ 125. What does the symbol Δ in a chemical equation mean?

    a.   Heat is supplied to the reaction.   c.   yields

    b.   A catalyst is needed.   d.   precipitate

_____ 126. What is the electron configuration of the gallium ion?

    a. $1s^2 2s^2 2p^6 3s^2 3p^6$ c. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4p^6$

    b. $1s^2 2s^2 2p^6 3s^2 3p^5 4s^1$ d. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10}$

_____ 127. How many valence electrons are in an atom of phosphorus?

    a.   2   c.   4

    b.   3   d.   5

_____ 128. What is the correct name for the compound $CoCl_2$?

    a.   cobalt(I) chlorate   c.   cobalt(II) chlorate

    b.   cobalt(I) chloride   d.   cobalt(II) chloride

_____ 129. Which of the following is true about subatomic particles?

    a.   Electrons are negatively charged and are the heaviest subatomic particle.

    b.   Protons are positively charged and the lightest subatomic particle.

    c.   Neutrons have no charge and are the lightest subatomic particle.

    d.   The mass of a neutron nearly equals the mass of a proton.

_____ 130. What is the molar mass of $(NH_4)_2CO_3$?

    a.   144 g   c.   96 g
    b.   138 g   d.   78 g

_____ 131. When iron rusts in air, iron(III) oxide is produced. How many moles of oxygen react with 2.4 mol of iron in the rusting reaction?
$4Fe(s) + 3O_2(g) \rightarrow 2Fe2O_3(s)$

    a.   1.2 mol   c.   2.4 mol
    b.   1.8 mol   d.   3.2 mol

_____ 132. What are the acids in the following equilibrium reaction?
$CN^- + H_2O \rightleftharpoons HCN + OH^-$

    a. CN^-, H_2O c. CN^-, OH^-
    b. H_2O, HCN d. H_2O, OH^-

_____ 133. An element has an atomic number of 76. The number of protons and electrons in a neutral atom of the element are _____.
    a.   152 protons and 76 electrons   c.   38 protons and 38 electrons
    b.   76 protons and 0 electrons   d.   76 protons and 76 electrons

_____ 134. Emission of light from an atom occurs when an electron _____.
    a.   drops from a higher to a lower energy level
    b.   jumps from a lower to a higher energy level
    c.   moves within its atomic orbital
    d.   falls into the nucleus

_____ 135. Which of the following electron configurations gives the correct arrangement of the four valence electrons of the carbon atom in the molecule methane (CH_4)?

    a. $2s^2 2p^2$ c. $2s^1 2p^2 3s^1$
    b. $2s^1 2p^1 3s^1$ d. $2s^1 2p^3$

_____ 136. A molecule with a single covalent bond is _____.
    a. CO_2 c. CO
    b. Cl_2 d. N_2

_____ 137. What is the maximum number of electrons in the second principal energy level?
    a.   2   c.   18
    b.   8   d.   32

_____ 138. What is the equilibrium constant for the following reaction?
$C + O_2 \rightleftharpoons CO_2$

    a. $\dfrac{[C][O_2]}{[CO_2]}$ c. $\dfrac{[C]^2[O_2]^2}{[CO_2]^2}$

    b. $\dfrac{[CO_2]}{[C][O_2]}$ d. $\dfrac{[CO_2]^2}{[C]^2[O_2]^2}$

_____ 139. Why do atoms share electrons in covalent bonds?
    a.   to become ions and attract each other
    b.   to attain a noble-gas electron configuration
   c.   to become more polar
    d.   to increase their atomic numbers

_____ 140. A substance with a K_a of 1×10^{-5} would favor which side of a reaction?
   a. products
   b. reactants

_____ 141. Which type of solution is one with a pH of 8?
   a. acidic
   b. basic
   c. neutral
   d. The type varies, depending on the solution.

_____ 142. The K_{eq} of a reaction is 4×10^{-7}. At equilibrium, the _____.
   a. reactants are favored
   b. products are favored
   c. reactants and products are present in equal amounts
   d. rate of the forward reaction is much greater than the rate of the reverse reaction

_____ 143. The atomic number of an element is the total number of which particles in the nucleus?
   a. neutrons
   b. protons
   c. electrons
   d. protons and electrons

_____ 144. What is the number of electrons in the outermost energy level of an oxygen atom?
   a. 2
   b. 4
   c. 6
   d. 8

_____ 145. What is the molarity of a solution containing 7.0 moles of solute in 569 mL of solution?
   a. $81M$
   b. $0.081M$
   c. $12M$
   d. $4.0M$

_____ 146. What does the number 84 in the name krypton-84 represent?
   a. the atomic number
   b. the mass number
   c. the sum of the protons and electrons
   d. twice the number of protons

_____ 147. Dalton's atomic theory included which idea?
   a. All atoms of all elements are the same size.
   b. Atoms of different elements always combine in one-to-one ratios.
   c. Atoms of the same element are always identical.
   d. Individual atoms can be seen with a microscope.

_____ 148. How many liters of hydrogen gas are needed to react with CS_2 to produce 2.50 L of CH_4 at STP?
   $$4H_2(g) + CS_2(l) \rightarrow CH_4(g) + 2H_2S(g)$$
   a. 2.50 L
   b. 5.00 L
   c. 7.50 L
   d. 10.0 L

_____ 149. Why do chemists use relative masses of atoms compared to a reference isotope rather than the actual masses of the atoms?
   a. The actual mass of an electron is very large compared to the actual mass of a proton.
   b. The actual masses of atoms are very small and difficult to work with.
   c. The number of subatomic particles in atoms of different elements varies.
   d. The actual masses of protons, electrons, and neutrons are not known.

_____ 150. Which statement is true about electronegativity?
   a. Electronegativity is the ability of an anion to attract another anion.
   b. Electronegativity generally increases as you move from top to bottom within a group.
   c. Electronegativity generally is higher for metals than for nonmetals.
   d. Electronegativity generally increases from left to right across a period.

____ 151. Aluminum reacts with sulfuric acid to produce aluminum sulfate and hydrogen gas. How many grams of aluminum sulfate would be formed if 250 g H_2SO_4 completely reacted with aluminum?

$2Al(s) + 3H_2SO_4(aq) \rightarrow Al_2(SO_4)_3(aq) + 3H_2(g)$

a. 0.85 g
b. 290 g

c. 450 g
d. 870 g

____ 152. Which of the following was NOT among Democritus's ideas?
   a. Matter consists of tiny particles called atoms.
   b. Atoms are indivisible.
   c. Atoms retain their identity in a chemical reaction.
   d. Atoms are indestructible.

____ 153. If 20.0 grams of Ca combines completely with 16.0 grams of S to form a compound, what is the percent composition of Ca in the compound?
   a. 1.25%
   b. 20.0%

   c. 44.4%
   d. 55.6%

____ 154. Which of the changes listed below would shift the following reaction to the right?
$4HCl(g) + O_2(g) \rightleftharpoons 2Cl_2(g) + 2H_2O(g)$

   a. addition of Cl_2

   c. increase of pressure

   b. removal of O_2

   d. decrease of pressure

____ 155. How many grams of H_3PO_4 are produced when 10.0 moles of water react with an excess of P_4O_{10}?

$P_4O_{10}(s) + 6H_2O(l) \rightarrow 4H_3PO_4(aq)$

   a. 1.22 g
   b. 6.7 g

   c. 147 g
   d. 653 g

____ 156. Which of the following elements has the lowest electronegativity?
   a. lithium
   b. carbon

   c. bromine
   d. fluorine

____ 157. Which of the following diatomic molecules is joined by a double covalent bond?
   a. O_2

   c. N_2

   b. Cl_2

   d. He_2

____ 158. What particle is needed to complete this nuclear reaction?
$^{222}_{86}Rn \rightarrow ^{218}_{84}Po + $ _____

   a. ^4_2He

   c. ^1_1H

   b. $^0_{-1}e$

   d. ^1_0n

____ 159. What is conserved in the reaction shown below?
$N_2(g) + 3F_2(g) \rightarrow 2NF_3(g)$

   a. atoms only
   b. mass only

   c. mass and atoms only
   d. moles only

____ 160. How many protons, electrons, and neutrons does an atom with atomic number 50 and mass number 125 contain?
   a. 50 protons, 50 electrons, 75 neutrons
   b. 75 electrons, 50 protons, 50 neutrons

   c. 120 neutrons, 50 protons, 75 electrons
   d. 70 neutrons, 75 protons, 50 electrons

____ 161. The quantity of heat required to change the temperature of 1 g of a substance by $1\,°C$ is defined as ____.
   a. a joule
   b. specific heat

   c. a calorie
   d. density

_____ 162. The molar mass of a certain gas is 49 g. What is the density of the gas in g/L at STP?

     a. 3.6×10^{-24} g/L   c.   2.2 g/L
     b.   0.46 g/L   d.   71 g/L

_____ 163. The reaction $2Fe + 3Cl_2 \rightarrow 2FeCl_3$ is an example of which type of reaction?

     a.   combustion reaction   c.   combination reaction
     b.   single-replacement reaction   d.   decomposition reaction

_____ 164. What is the correct name for the N^{3-} ion?
     a.   nitrate ion   c.   nitride ion
     b.   nitrogen ion   d.   nitrite ion

_____ 165. At STP, how many liters of oxygen are required to react completely with 3.6 liters of hydrogen to form water?

$2H_2(g) + O_2(g) \rightarrow 2H_2O(g)$

     a.   1.8 L   c.   2.0 L
     b.   3.6 L   d.   2.4 L

_____ 166. Which of the following is true about the total number of reactants and the total number of products in the reaction shown below?

$C_5H_{12}(l) + 8O_2(g) \rightarrow 5CO_2(g) + 6H_2O(g)$

     a.   9 moles of reactants chemically change into 11 moles of product.
     b.   9 grams of reactants chemically change into 11 grams of product.
     c.   9 liters of reactants chemically change into 11 liters of product.
     d.   9 atoms of reactants chemically change into 11 atoms of product.

_____ 167. Which of the following is necessary to calculate the atomic mass of an element?
     a.   the atomic mass of carbon-12
     b.   the atomic number of the element
     c.   the relative masses of the element's protons and neutrons
     d.   the masses of each isotope of the element

_____ 168. What is the percent by mass of carbon in acetone, C_3H_6O?

     a.   20.7%   c.   1.61%
     b.   62.1%   d.   30.0%

_____ 169. Which of the following isotopes has the same number of neutrons as phosphorus-31?
     a. $^{32}_{15}P$ c. $^{29}_{14}Si$
     b. $^{32}_{16}S$ d. $^{28}_{14}Si$

_____ 170. All atoms of the same element have the same _____.
     a.   number of neutrons   c.   mass numbers
     b.   number of protons   d.   mass

_____ 171. All of the following are physical properties of matter EXCEPT _____.
     a.   mass   c.   melting point
     b.   color   d.   ability to rust

_____ 172. A catalyst works by _____.
     a.   lowering the activation energy barrier
     b.   shifting the equilibrium position toward the products
     c.   changing the temperature of the reactants
   d.   changing the particle size of the reactants

____ 173. The equation below shows the decomposition of lead nitrate. How many grams of oxygen are produced when 11.5 g NO_2 is formed?

$$2Pb(NO_3)_2(s) \rightarrow 2PbO(s) + 4NO_2(g) + O_2(g)$$

    a.   1.00 g
    b.   2.00 g
    c.   2.88 g
    d.   32.0 g

____ 174. What are the missing coefficients for the skeleton equation below?
$$Cr(s) + Fe(NO_3)_2(aq) \rightarrow Fe(s) + Cr(NO_3)_3(aq)$$

    a.   4, 6, 6, 2
    b.   2, 3, 2, 3
    c.   2, 3, 3, 2
    d.   1, 3, 3, 1

____ 175. To what element does polonium-208 (atomic number 84) decay when it emits an alpha particle?

    a. $^{210}_{82}Pb$
    b. $^{210}_{82}Po$
    c. $^{204}_{82}Pb$
    d. $^{214}_{86}Rn$

____ 176. Which of these solutions is the most basic?

    a. $[H^+] = 1 \times 10^{-2}M$
    b. $[OH^-] = 1 \times 10^{-4}M$
    c. $[H^+] = 1 \times 10^{-11}M$
    d. $[OH^-] = 1 \times 10^{-13}M$

____ 177. What happens to a reaction at equilibrium when more reactant is added to the system?
    a.   The reaction makes more products.
    b.   The reaction makes more reactants.
    c.   The reaction is unchanged.
    d.   The answer cannot be determined.

____ 178. A vapor is which state of matter?
    a.   solid
    b.   liquid
    c.   gas
    d.   all of the above

____ 179. A piece of metal is heated, then submerged in cool water. Which statement below describes what happens?
    a.   The temperature of the metal will increase.
    b.   The temperature of the water will increase.
    c.   The temperature of the water will decrease.
    d.   The temperature of the water will increase and the temperature of the metal will decrease.

____ 180. A beta particle is a(n) ____.
    a.   photon
    b.   electron
    c.   helium nucleus
    d.   hydrogen nucleus

____ 181. If the temperature of a piece of steel decreases, what happens to its density?
    a.   The density decreases.
    b.   The density increases.
    c.   The density does not change.
    d.   The density first increases, then decreases.

____ 182. How many joules are in 148 calories?
    a.   35.4 J
    b.   619 J
    c.   6.61 J
    d.   148 J

____ 183. The specific heat of copper is about 0.40 joules/gram °C. How much heat is needed to change the temperature of a 60.0-gram sample of copper from 20.0 °C to 60.0 °C?
    a.   720 J
    b.   1200 J
    c.   480 J
    d.   960 J

____ 184. The ΔH is positive the reaction is ____.
    a.   exothermic
    b.   endothermic

_____ 185. Which of the following examples represent an exothermic reaction?
   a. cooking food
   b. freezing water

_____ 186. What is the amount of heat required to raise the temperature of 200.0 g of aluminum by 10°C? (specific heat of aluminum = $0.21 \dfrac{\text{cal}}{\text{g}°\text{C}}$)
   a. 4.200 x 10² cal
   b. 4.12 x 10⁻² cal
   c. 4.2 x 10² cal
   d. 4.20 x 10³ cal

_____ 187. How much heat needs to be absorbed by 100.0 g of water at 5.0°C to raise its temperature to 75.0°C?
   a. 3.0 x 10⁴ J
   b. 1.57 x 10⁵ J
   c. 2.93 x 10⁴ J
   d. 2.926 x 10⁴ J

_____ 188. What is the specific heat of a substance if 1560 cal are required to raise the temperature of a 312-g sample by 15°C?
   a. $1.33 \dfrac{\text{cal}}{\text{g}°\text{C}}$
   b. $0.33 \dfrac{\text{cal}}{\text{g}°\text{C}}$
   c. $0.330 \dfrac{\text{cal}}{\text{g}°\text{C}}$
   d. $0.033 \dfrac{\text{cal}}{\text{g}°\text{C}}$

_____ 189. Which of the following is NOT a form of energy?
   a. light
   b. electricity
   c. heat
   d. pressure

_____ 190. Dtermine the ΔH for the reaction.
   $2SO_2(g) + O_2(g) \rightarrow 2SO_3(g) + 197.8 \text{ kJ}$
   a. + 197.8 kJ
   b. −197.8 kJ

_____ 191. Using the graph below, choose the correct formula to find the amount of heat change from E to F.
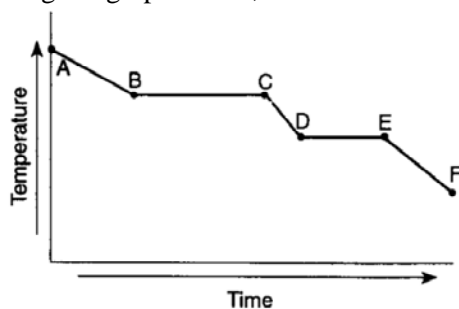
   a. Q = mCΔT
   b. Q = mΔHvap
   c. Q = m-ΔHvap
   d. Q = m-ΔHfus
   e. Q = mΔHfus

_____ 192. Choose the correct formula to find the amount of heat change at A.
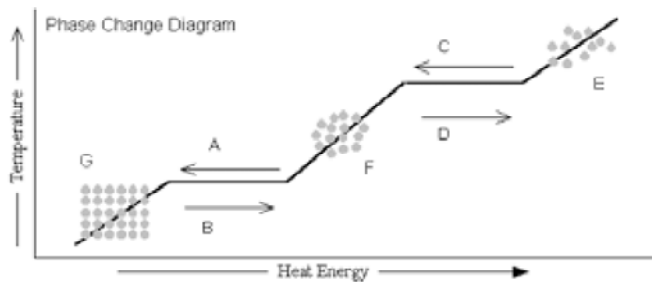
a.	Q = mΔHvap	d.	Q = mΔHfus
b.	Q = mCΔT	e.	Q = m-ΔHfus
c.	Q = m-ΔHvap		

_____ 193. The following graph represents what type of reaction?
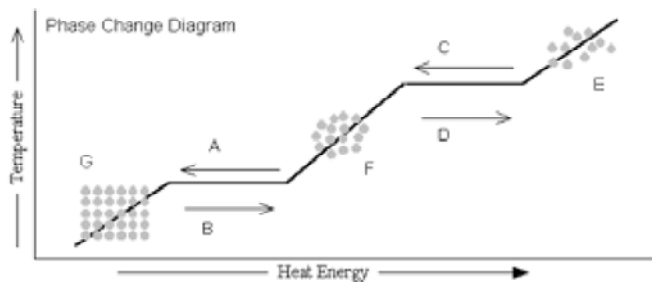
a.	exothermic	b.	endothermic

_____ 194. The orbital diagram for a ground-state nitrogen atom is
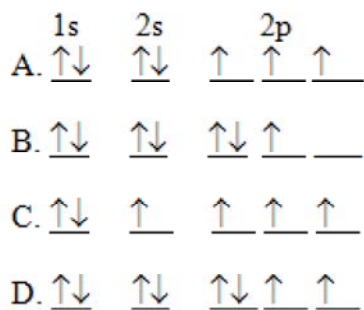
a. A
b. B
c. C
d. D

_____ 195. Which ground-state atom has an electron configuration described by the following *orbital diagram*?

[Ne] $\underset{3s}{\uparrow\downarrow}$ $\underset{3p}{\uparrow\ \uparrow\ \uparrow}$
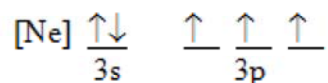
   a.   phosphorus
   b.   nitrogen
   c.   arsenic
   d.   vanadium

_____ 196. Using the diagram below, what will you see on the right of the prism?
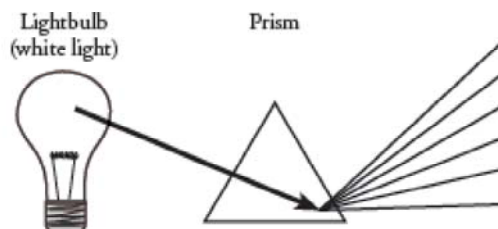
   a.   a continuous spectrum   b.   spectral lines

_____ 197. Using the diagram below, which electromagnetic radiation would release the most energy?
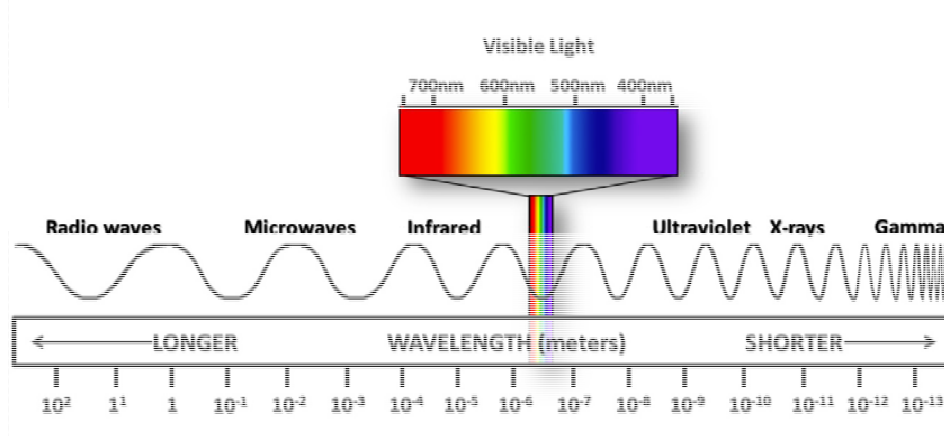
   a.   radio waves   c.   x-rays
   b.   infrared   d.   gamma rays

____ 198. Using the diagram below, which of the following electromagnetic waves have the lowest frequencies?
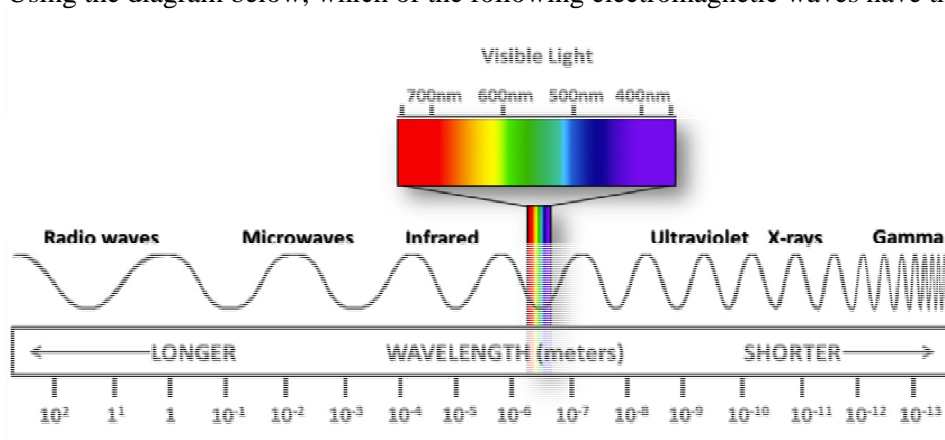
a. ultraviolet light waves   c. microwaves
b. X-rays   d. gamma rays

____ 199. Which of the following quantum leaps would be associated with the greatest energy of emitted light?
a. $n = 5$ to $n = 1$ c. $n = 2$ to $n = 5$
b. $n = 4$ to $n = 5$ d. $n = 5$ to $n = 4$

____ 200. Which color of visible light has the longest wavelength?
a. red   c. blue
b. green   d. violet

____ 201. Arrange the following elements: P^{3-}, S^{2-}, K^+, Ca^{2+}, Sc^{3+}, in order of increasing ionic size.
a. Sc^{3+}, Ca^{2+}, K^+, P^{3-}, S^{2-} c. K^+, Ca^{2+}, Sc^{3+}, S^{2-}, P^{3-}
b. P^{3-}, S^{2-}, K^+, Ca^{2+}, Sc^{3+} d. Sc^{3+}, Ca^{2+}, K^+, S^{2-}, P^{3-}

____ 202. Choose the correct noble gas electron configuration for Plutonium
a. $[Rn]\ 7s^2\ 5f^5\ 6d^1$ c. $[Rn]\ 7s^2\ 5f^5$
b. $[Xe]\ 7s^2\ 5f^5\ 6d^1$ d. $[Xe]\ 7s^2\ 5f^6$

____ 203. The equilibrium constant expression for the reaction: $N_2\ (g) + O_2\ (g) \rightleftharpoons 2NO\ (g)$ is
a. $K_{eq} = 2[NO]/[N_2][O_2]$
b. $K_{eq} = [N_2][O_2]/2[NO]$
c. $K_{eq} = [NO]^2/[N_2][O_2]$
d. $K_{eq} = [N_2][O_2]/[NO]^2$

_____ 204. Where is the transition state in the diagram below?
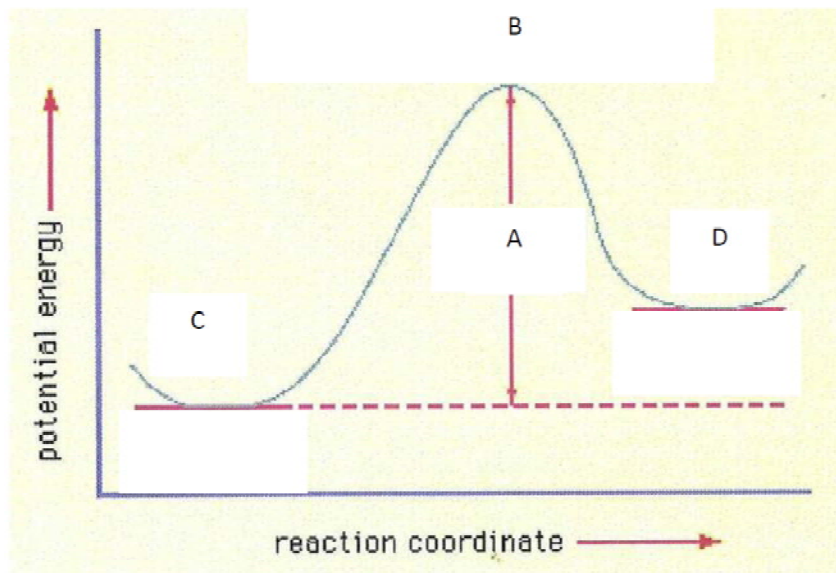
a. A   c. C
b. B   d. D

_____ 205.

pH Levels

[H₃O⁺]	pH	Example
1×100	0	HCl (4%)
1×10^{-1}	1	Stomach acid
1×10^{-2}	2	Lemon juice
1×10^{-3}	3	Vinegar
1×10^{-4}	4	Soda
1×10^{-5}	5	Rainwater
1×10^{-6}	6	Milk
1×10^{-7}	7	Pure water
1×10^{-8}	8	Egg whites
1×10^{-9}	9	Baking soda
1×10^{-10}	10	Ammonia
1×10^{-11}	11	
1×10^{-12}	12	Drain cleaner
1×10^{-13}	13	NaOH (4%)
1×10^{-14}	14	

Which substance is the most acidic?
a. Milk   c. Lemon juice
b. HCl   d. Baking soda

____ 206. An analysis of the equilibrium mixture in a 1-L flask gives the following results: [HCl] = .30 mol,[O_2] = .20 mol, [H_2O] = 1.2 mol, and [Cl_2] = .60 . Calculate the equilibrium constant given the concentrations.

$$4HCl(g) + O_2(g) \quad \text{<--->} \quad 2H_2O(g) + 2Cl_2(g) + 10kJ$$

a. 3.2×10^2
b. 0.51

c. 2.2×10^2
d. 1.6

Multiple Response
Identify one or more choices that best complete the statement or answer the question.

____ 207. Which element(s) are in the unknown?

Below are diagrams for the bright line spectra of four elements and the spectrum of a mixture of unknown gases.

a. Li
b. H

c. He
d. Na

____ 208. Which of the following are strong acids (choose all that apply)?
a. HCN
b. HBr
c. $HClO_4$

d. H_2SO_3
e. HNO_3

____ 209. Which of the following are strong bases (choose all that apply)?
a. Ca(OH)2
b. Al(OH)3

c. NH3
d. LiOH

____ 210. Which structural formulas represent nonpolar molecules? **Choose all that apply**
a. SiO_2
b. NH_3

c. CFH_3
d. C_2H_2

____ 211. What intermolecular forces are present in HNO? **Choose all that apply**
a. Dispersion
b. Dipole-Dipole

c. Hydrogen Bonding
d. Ionic Bonding

____ 212. Which of the following will conduct electricity, dissociate completely and produce a bright light? Choose all that apply.
a. strong acid
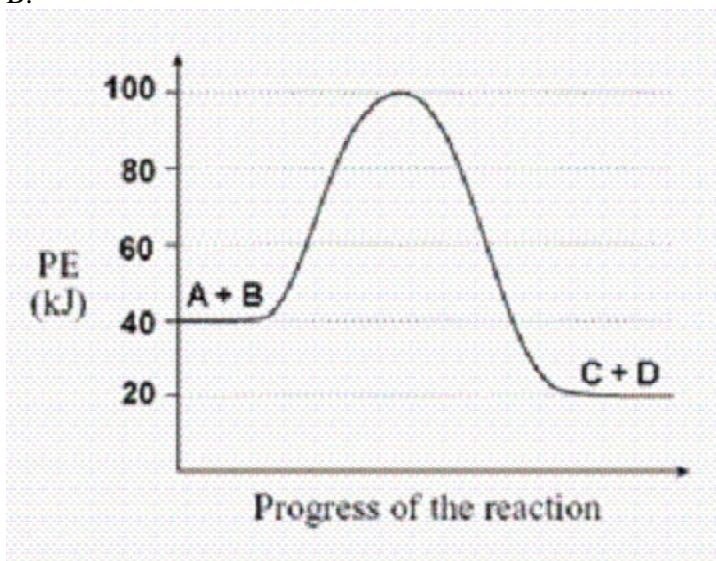b. weak acid

c. weak base
d. strong base

Problem

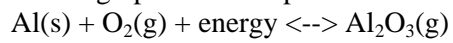213. Which of the following pictures best represents an exothermic reaction?

A.

B.

214. Which graph belows represents the following reaction?
     $Al(s) + O_2(g) + energy <--> Al_2O_3(g)$
     1: A
     2: B
     3: C
     4: D

Reaction Coordinate

(1)

Reaction Coordinate

(3)

Reaction Coordinate

(2)

Reaction Coordinate
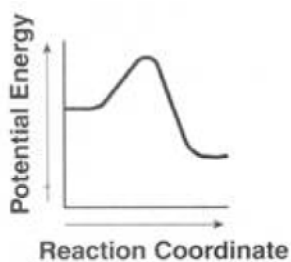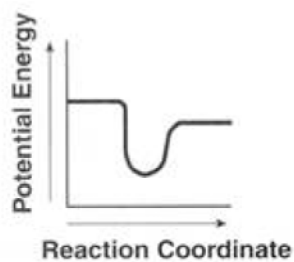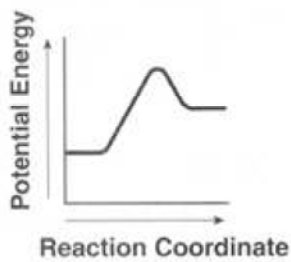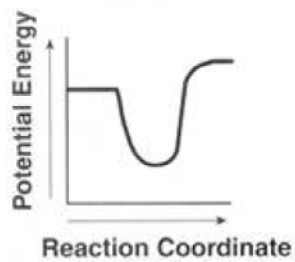
(4)

Practice Final Spring 2016
Answer Section

MULTIPLE CHOICE

1. ANS: B   PTS: 1   DIF: L2   REF: p. 192 | p. 195
     OBJ: 7.2.1   STA: Ch.2.a
2. ANS: C   PTS: 1   DIF: L2   REF: p. 360 | p. 361 | p. 362
     OBJ: 12.2.2   STA: Ch.3.d
3. ANS: A   PTS: 1   DIF: L2   REF: p. 549
     OBJ: 18.2.1   STA: Ch.8.a
4. ANS: D   PTS: 1   DIF: L2   REF: p. 221
     OBJ: 8.2.1   STA: Ch.2.a
5. ANS: B   PTS: 1   DIF: L1   REF: p. 595
     OBJ: 19.2.1   STA: Ch.5.f
6. ANS: A   PTS: 1   DIF: L2   REF: p. 272
     OBJ: 9.4.1   STA: Ch.5.a
7. ANS: C   PTS: 1   DIF: L2   REF: p. 375
     OBJ: 12.3.2   STA: Ch.3.f
8. ANS: D   PTS: 1   DIF: L1   REF: p. 587
     OBJ: 19.4.1   STA: Ch.5
9. ANS: B   PTS: 1   DIF: L2   REF: p. 40
     OBJ: 2.2.1   STA: Ch.6
10. ANS: C   PTS: 1   DIF: L1   REF: p. 546 | p. 547
     OBJ: 18.1.2   STA: Ch.8.c
11. ANS: B   PTS: 1   DIF: L3   REF: p. 162 | p. 163 | p. 172
     OBJ: 6.3.2   STA: Ch.1.c
12. ANS: C   PTS: 1   DIF: L3   REF: p. 174
     OBJ: 6.3.3   STA: Ch.1.c
13. ANS: D   PTS: 1   DIF: L1   REF: p. 324 | p. 325
     OBJ: 11.1.3   STA: Ch.3.a | Ch.3.e
14. ANS: B   PTS: 1   DIF: L2   REF: p. 801
     OBJ: 25.1.2   STA: Ch.11.d
15. ANS: A   PTS: 1   DIF: L2   REF: p. 104
     OBJ: 4.1.2
16. ANS: C   PTS: 1   DIF: L3   REF: p. 257 | p. 264
     OBJ: 9.2.2 | 9.5.2   STA: Ch.5
17. ANS: D   PTS: 1   DIF: L1   REF: p. 327
     OBJ: 11.1.3   STA: Ch.3.a | Ch.3.e
18. ANS: B   PTS: 1   DIF: L1   REF: p. 190
     OBJ: 7.1.3   STA: Ch.1.c | Ch.2.a | Ch.1.d
19. ANS: A   PTS: 1   DIF: L1   REF: p. 232
     OBJ: 8.3.2   STA: Ch.2.a
20. ANS: C   PTS: 1   DIF: L2   REF: p. 269
     OBJ: 9.3.2   STA: Ch.2
21. ANS: A   PTS: 1   DIF: L2   REF: p. 471 | p. 472
     OBJ: 16.1.1   STA: Ch.6.b

22. ANS: B   PTS: 1   DIF: L1   REF: p. 598
    OBJ: 19.2.2   STA: Ch.5.d
23. ANS: D   PTS: 1   DIF: L2   REF: p. 133 | p. 134 | p. 135
    OBJ: 5.2.1   STA: Ch.1.g
24. ANS: A   PTS: 1   DIF: L2   REF: p. 554
    OBJ: 18.2.2   STA: Ch.9.a
25. ANS: B   PTS: 1   DIF: L3   REF: p. 111 | p. 112 | p. 113
    OBJ: 4.3.1 | 4.3.2   STA: Ch.11.c
26. ANS: D   PTS: 1   DIF: L1   REF: p. 114
    OBJ: 4.3.3
27. ANS: A   PTS: 1   DIF: L1   REF: p. 302
    OBJ: 10.2.2   STA: Ch.4
28. ANS: B   PTS: 1   DIF: L2   REF: p. 269 | p. 277
    OBJ: 9.3.2 | 9.5.3   STA: Ch.2.b | Ch.5
29. ANS: A   PTS: 1   DIF: L1   REF: p. 66
    OBJ: 3.1.3
30. ANS: C   PTS: 1   DIF: L2   REF: p. 108
    OBJ: 4.2.2   STA: Ch.1.h
31. ANS: C   PTS: 1   DIF: L2   REF: p. 106 | p. 107
    OBJ: 4.2.1 | 4.2.2   STA: Ch.11.a
32. ANS: D   PTS: 1   DIF: L1   REF: p. 63
    OBJ: 3.1.1
33. ANS: B   PTS: 1   DIF: L2   REF: p. 131
    OBJ: 5.1.3   STA: Ch.1.i
34. ANS: A   PTS: 1   DIF: L1   REF: p. 334 | p. 335
    OBJ: 11.2.2
35. ANS: B   PTS: 1   DIF: L2   REF: p. 262
    OBJ: 9.2.1   STA: Ch.2
36. ANS: B   PTS: 1   DIF: L1   REF: p. 591
    OBJ: 19.1.2   STA: Ch.5.e
37. ANS: B   PTS: 1   DIF: L2   REF: p. 356
    OBJ: 12.1.2   STA: Ch.3.a
38. ANS: A   PTS: 1   DIF: L2   REF: p. 157
    OBJ: 6.1.1   STA: Ch.1.a
39. ANS: B   PTS: 1   DIF: L1   REF: p. 544
    OBJ: 18.1.1   STA: Ch.8.d
40. ANS: C   PTS: 1   DIF: L2   REF: p. 112
    OBJ: 4.3.1   STA: Ch.11.c
41. ANS: B   PTS: 1   DIF: L1   REF: p. 188
    OBJ: 7.1.1   STA: Ch.1.c | Ch.2.a | Ch.1.d
42. ANS: B   PTS: 1   DIF: L1   REF: p. 39
    OBJ: 2.1.1
43. ANS: C   PTS: 1   DIF: L2   REF: p. 173
    OBJ: 6.3.3   STA: Ch.1.c
44. ANS: C   PTS: 1   DIF: L2   REF: p. 217
    OBJ: 8.2.1   STA: Ch.2.a
45. ANS: C   PTS: 1   DIF: L1   REF: p. 323
    OBJ: 11.1.2   STA: Ch.3.a

46. ANS: D   PTS: 1   DIF: L2   REF: p. 591
    OBJ: 19.1.2   STA: Ch.5.e
47. ANS: C   PTS: 1   DIF: L1   REF: p. 42
    OBJ: 2.1.3   STA: Ch.2.d
48. ANS: C   PTS: 1   DIF: L1   REF: p. 77 | p. 78
    OBJ: 3.2.3   STA: Ch.4.e
49. ANS: B   PTS: 1   DIF: L3   REF: p. 171 | p. 175
    OBJ: 6.3.1   STA: Ch.1.a
50. ANS: D   PTS: 1   DIF: L1   REF: p. 112 | p. 113
    OBJ: 4.3.1   STA: Ch.11.c
51. ANS: B   PTS: 1   DIF: L1   REF: p. 607
    OBJ: 19.3.1   STA: Ch.5.c
52. ANS: B   PTS: 1   DIF: L2   REF: p. 111
    OBJ: 4.3.1 | 4.3.4   STA: Ch.1.a
53. ANS: B   PTS: 1   DIF: L2   REF: p. 801
    OBJ: 25.1.2   STA: Ch.11.d
54. ANS: B   PTS: 1   DIF: L1   REF: p. 542
    OBJ: 18.1.1   STA: Ch.9.c
55. ANS: A   PTS: 1   DIF: L1   REF: p. 324 | p. 325
    OBJ: 11.1.3   STA: Ch.3.a | Ch.3.e
56. ANS: C   PTS: 1   DIF: L2   REF: p. 66
    OBJ: 3.1.2
57. ANS: A   PTS: 1   DIF: L2   REF: p. 175
    OBJ: 6.3.3   STA: Ch.1.c
58. ANS: A   PTS: 1   DIF: L2   REF: p. 480 | p. 482
    OBJ: 16.2.1   STA: Ch.6.d
59. ANS: B   PTS: 1   DIF: L2   REF: p. 360 | p. 361 | p. 362
    OBJ: 12.2.2   STA: Ch.3.d
60. ANS: D   PTS: 1   DIF: L2   REF: p. 800 | p. 804
    OBJ: 25.1.2 | 25.2.1   STA: Ch.11.d
61. ANS: C   PTS: 1   DIF: L1   REF: p. 550
    OBJ: 18.2.1   STA: Ch.9.b
62. ANS: B   PTS: 1   DIF: L2   REF: p. 336
    OBJ: 11.2.1   STA: Ch.3.a | Ch.3.e
63. ANS: B   PTS: 1   DIF: L2   REF: p. 481
    OBJ: 16.2.1   STA: Ch.6.d
64. ANS: C   PTS: 1   DIF: L2   REF: p. 111
    OBJ: 4.3.2
65. ANS: D   PTS: 1   DIF: L3   REF: p. 481 | p. 482
    OBJ: 16.2.1   STA: Ch.6.d
66. ANS: C   PTS: 1   DIF: L2   REF: p. 131
    OBJ: 5.2.1   STA: Ch.1.i
67. ANS: A   PTS: 1   DIF: L1   REF: p. 587
    OBJ: 19.1.1   STA: Ch.5.a
68. ANS: B   PTS: 1   DIF: L1   REF: p. 254
    OBJ: 9.1.1
69. ANS: B   PTS: 1   DIF: L1   REF: p. 327
    OBJ: 11.1.3   STA: Ch.3.a | Ch.3.e

70. ANS: B PTS: 1 DIF: L2 REF: p. 294
  OBJ: 10.1.3 STA: Ch.3
71. ANS: B PTS: 1 DIF: L1 REF: p. 240
  OBJ: 8.4.3 STA: Ch.2.a
72. ANS: A PTS: 1 DIF: L2 REF: p. 552 | p. 553
  OBJ: 18.2.2 STA: Ch.9.a
73. ANS: D PTS: 1 DIF: L1 REF: p. 594
  OBJ: 19.2.1 STA: Ch.5.c
74. ANS: C PTS: 1 DIF: L3 REF: p. 106
  OBJ: 4.2.1 STA: Ch.1
75. ANS: C PTS: 1 DIF: L1 REF: p. 333
  OBJ: 11.2.1
76. ANS: D PTS: 1 DIF: L1 REF: p. 595
  OBJ: 19.2.1 STA: Ch.5.d
77. ANS: A PTS: 1 DIF: L1 REF: p. 336 | p. 337
  OBJ: 11.2.2
78. ANS: A PTS: 1 DIF: L1 REF: p. 800 | p. 802
  OBJ: 25.1.2 STA: Ch.11.e
79. ANS: D PTS: 1 DIF: L2 REF: p. 171
  OBJ: 6.3.1 STA: Ch.1.a
80. ANS: D PTS: 1 DIF: L2 REF: p. 270 | p. 278
  OBJ: 9.3.2 | 9.5.2 STA: Ch.5
81. ANS: A PTS: 1 DIF: L2 REF: p. 110
  OBJ: 4.2.1 | 4.3.1 STA: Ch.1.a
82. ANS: B PTS: 1 DIF: L1 REF: p. 84
  OBJ: 3.3.2
83. ANS: C PTS: 1 DIF: L2 REF: p. 42
  OBJ: 2.1.4
84. ANS: A PTS: 1 DIF: L2 REF: p. 188 | p. 189
  OBJ: 7.1.1 STA: Ch.1.g
85. ANS: A PTS: 1 DIF: L2 REF: p. 592
  OBJ: 19.1.2 STA: Ch.5.e
86. ANS: B PTS: 1 DIF: L2 REF: p. 269
  OBJ: 9.3.2 STA: Ch.2
87. ANS: D PTS: 1 DIF: L2 REF: p. 112 | p. 113
  OBJ: 4.3.2
88. ANS: B PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
  OBJ: 12.2.2 STA: Ch.3.d
89. ANS: A PTS: 1 DIF: L2 REF: p. 554
  OBJ: 18.2.2 STA: Ch.8.b
90. ANS: A PTS: 1 DIF: L2 REF: p. 233
  OBJ: 8.3.2 STA: Ch.2.a
91. ANS: D PTS: 1 DIF: L1 REF: p. 323
  OBJ: 11.1.2 STA: Ch.3.a
92. ANS: A PTS: 1 DIF: L2 REF: p. 192
  OBJ: 7.1.4 STA: Ch.1.g
93. ANS: D PTS: 1 DIF: L2 REF: p. 115
  OBJ: 4.3.3

94. ANS: D   PTS: 1   DIF: L2   REF: p. 375
    OBJ: 12.3.2   STA: Ch.3.f
95. ANS: A   PTS: 1   DIF: L1   REF: p. 546
    OBJ: 18.1.2   STA: Ch.8.c
96. ANS: C   PTS: 1   DIF: L3   REF: p. 112 | p. 113
    OBJ: 4.3.1   STA: Ch.11.c
97. ANS: C   PTS: 1   DIF: L1   REF: p. 800
    OBJ: 25.1.2   STA: Ch.11.d
98. ANS: D   PTS: 1   DIF: L1   REF: p. 45
    OBJ: 2.2.2
99. ANS: D   PTS: 1   DIF: L1   REF: p. 594
    OBJ: 19.2.1   STA: Ch.5.b
100. ANS: A   PTS: 1   DIF: L1   REF: p. 112 | p. 113
    OBJ: 4.3.1   STA: Ch.11.c
101. ANS: B   PTS: 1   DIF: L1   REF: p. 333
    OBJ: 11.2.2
102. ANS: A   PTS: 1   DIF: L2   REF: p. 157
    OBJ: 6.2.1   STA: Ch.1.a
103. ANS: D   PTS: 1   DIF: L1   REF: p. 481
    OBJ: 16.2.1   STA: Ch.6.d
104. ANS: A   PTS: 1   DIF: L1   REF: p. 217
    OBJ: 8.2.1   STA: Ch.2.a
105. ANS: D   PTS: 1   DIF: L2   REF: p. 40
    OBJ: 2.1.2
106. ANS: A   PTS: 1   DIF: L2   REF: p. 172 | p. 176
    OBJ: 6.3.3   STA: Ch.1.c
107. ANS: D   PTS: 1   DIF: L2   REF: p. 800
    OBJ: 25.1.2   STA: Ch.11.d
108. ANS: A   PTS: 1   DIF: L2   REF: p. 107 | p. 108
    OBJ: 4.2.2   STA: Ch.1.e
109. ANS: A   PTS: 1   DIF: L1   REF: p. 506
    OBJ: 17.1.2   STA: Ch.7.b
110. ANS: C   PTS: 1   DIF: L1   REF: p. 271
    OBJ: 9.4.1   STA: Ch.5.a
111. ANS: B   PTS: 1   DIF: L1   REF: p. 240
    OBJ: 8.4.3   STA: Ch.2.a
112. ANS: B   PTS: 1   DIF: L2   REF: p. 115
    OBJ: 4.3.3   STA: Ch.1.a
113. ANS: B   PTS: 1   DIF: L2   REF: p. 290 | p. 291
    OBJ: 10.1.2   STA: Ch.3.d
114. ANS: C   PTS: 1   DIF: L3   REF: p. 803 | p. 804
    OBJ: 25.2.1   STA: Ch.11.d
115. ANS: C   PTS: 1   DIF: L1   REF: p. 802
    OBJ: 25.1.2   STA: Ch.11.e
116. ANS: C   PTS: 1   DIF: L1   REF: p. 800
    OBJ: 25.1.2   STA: Ch.11.d
117. ANS: D   PTS: 1   DIF: L2   REF: p. 800
    OBJ: 25.1.2   STA: Ch.11.e

118. ANS: B   PTS: 1   DIF: L2   REF: p. 301
     OBJ: 10.2.2   STA: Ch.4.h
119. ANS: A   PTS: 1   DIF: L2   REF: p. 262
     OBJ: 9.2.1   STA: Ch.2
120. ANS: C   PTS: 1   DIF: L1   REF: p. 66
     OBJ: 3.1.2
121. ANS: B   PTS: 1   DIF: L1   REF: p. 480
     OBJ: 16.2.1   STA: Ch.6.d
122. ANS: A   PTS: 1   DIF: L1   REF: p. 45
     OBJ: 2.2.2   STA: Ch.6
123. ANS: B   PTS: 1   DIF: L1   REF: p. 605
     OBJ: 19.3.1   STA: Ch.5.c
124. ANS: B   PTS: 1   DIF: L1   REF: p. 240
     OBJ: 8.1.1 | 8.4.3   STA: Ch.2.a
125. ANS: A   PTS: 1   DIF: L1   REF: p. 323
     OBJ: 11.1.2   STA: Ch.3.a
126. ANS: D   PTS: 1   DIF: L2   REF: p. 190
     OBJ: 7.1.1   STA: Ch.1.g
127. ANS: D   PTS: 1   DIF: L1   REF: p. 187
     OBJ: 7.1.1   STA: Ch.1.c | Ch.2.a | Ch.1.d
128. ANS: D   PTS: 1   DIF: L2   REF: p. 261 | p. 262 | p. 277
     OBJ: 9.2.1 | 9.5.2   STA: Ch.5
129. ANS: D   PTS: 1   DIF: L2   REF: p. 104 | p. 105 | p. 106
     OBJ: 4.2.1   STA: Ch.1.a
130. ANS: C   PTS: 1   DIF: L2   REF: p. 295 | p. 296
     OBJ: 10.1.4   STA: Ch.3
131. ANS: B   PTS: 1   DIF: L2   REF: p. 359 | p. 360
     OBJ: 12.2.1   STA: Ch.3.d
132. ANS: B   PTS: 1   DIF: L2   REF: p. 591
     OBJ: 19.1.2   STA: Ch.5.b
133. ANS: D   PTS: 1   DIF: L1   REF: p. 110
     OBJ: 4.3.1   STA: Ch.1.a
134. ANS: A   PTS: 1   DIF: L2   REF: p. 141
     OBJ: 5.3.2   STA: Ch.1.j
135. ANS: D   PTS: 1   DIF: L3   REF: p. 220 | p. 234
     OBJ: 8.2.2   STA: Ch.1.g
136. ANS: B   PTS: 1   DIF: L2   REF: p. 222
     OBJ: 8.2.1 | 8.2.4   STA: Ch.2.a
137. ANS: B   PTS: 1   DIF: L3   REF: p. 132
     OBJ: 5.1.3   STA: Ch.1.i
138. ANS: B   PTS: 1   DIF: L1   REF: p. 556
     OBJ: 18.2.3   STA: Ch.9.c
139. ANS: B   PTS: 1   DIF: L2   REF: p. 217
     OBJ: 8.2.1   STA: Ch.2.a
140. ANS: B   PTS: 1   DIF: L2   REF: p. 607
     OBJ: 19.3.3   STA: Ch.5.c
141. ANS: B   PTS: 1   DIF: L1   REF: p. 597
     OBJ: 19.2.2   STA: Ch.5.d

142. ANS: A   PTS: 1   DIF: L1   REF: p. 556
    OBJ: 18.2.3   STA: Ch.9.c
143. ANS: B   PTS: 1   DIF: L1   REF: p. 110
    OBJ: 4.3.1   STA: Ch.1.a
144. ANS: C   PTS: 1   DIF: L2   REF: p. 134 | p. 135
    OBJ: 5.2.1   STA: Ch.1.g
145. ANS: C   PTS: 1   DIF: L2   REF: p. 480 | p. 481
    OBJ: 16.2.1   STA: Ch.6.d
146. ANS: B   PTS: 1   DIF: L1   REF: p. 111
    OBJ: 4.3.1   STA: Ch.1.a | Ch.11.c
147. ANS: C   PTS: 1   DIF: L2   REF: p. 102
    OBJ: 4.1.2
148. ANS: D   PTS: 1   DIF: L2   REF: p. 363 | p. 364 | p. 365 | p. 366
    OBJ: 12.2.2   STA: Ch.3.d
149. ANS: B   PTS: 1   DIF: L2   REF: p. 114
    OBJ: 4.3.3
150. ANS: D   PTS: 1   DIF: L2   REF: p. 177
    OBJ: 6.3.3   STA: Ch.1.c
151. ANS: B   PTS: 1   DIF: L2   REF: p. 360 | p. 361 | p. 362
    OBJ: 12.2.2   STA: Ch.3.d
152. ANS: C   PTS: 1   DIF: L2   REF: p. 101
    OBJ: 4.1.1
153. ANS: D   PTS: 1   DIF: L2   REF: p. 305 | p. 306
    OBJ: 10.3.1   STA: Ch.3
154. ANS: C   PTS: 1   DIF: L2   REF: p. 554
    OBJ: 18.2.2   STA: Ch.9.a
155. ANS: D   PTS: 1   DIF: L2   REF: p. 360 | p. 361 | p. 362
    OBJ: 12.2.2   STA: Ch.3.d
156. ANS: A   PTS: 1   DIF: L2   REF: p. 177
    OBJ: 6.3.3   STA: Ch.1.c
157. ANS: A   PTS: 1   DIF: L2   REF: p. 221
    OBJ: 8.2.3   STA: Ch.2.a
158. ANS: A   PTS: 1   DIF: L2   REF: p. 801
    OBJ: 25.2.1   STA: Ch.11.d
159. ANS: C   PTS: 1   DIF: L1   REF: p. 356
    OBJ: 12.1.2 | 12.1.3   STA: Ch.3.d
160. ANS: A   PTS: 1   DIF: L2   REF: p. 111
    OBJ: 4.3.1   STA: Ch.1.a
161. ANS: B   PTS: 1   DIF: L1   REF: p. 507
    OBJ: 17.1.2   STA: Ch.7.d
162. ANS: C   PTS: 1   DIF: L2   REF: p. 302
    OBJ: 10.2.2   STA: Ch.4.h
163. ANS: C   PTS: 1   DIF: L1   REF: p. 330 | p. 337
    OBJ: 11.2.2
164. ANS: C   PTS: 1   DIF: L1   REF: p. 254
    OBJ: 9.1.1   STA: Ch.3
165. ANS: A   PTS: 1   DIF: L1   REF: p. 363 | p. 364 | p. 365 | p. 366
    OBJ: 12.2.2   STA: Ch.3.d

166. ANS: A   PTS: 1   DIF: L2   REF: p. 356
     OBJ: 12.1.2   STA: Ch.3.d
167. ANS: D   PTS: 1   DIF: L2   REF: p. 116
     OBJ: 4.3.3
168. ANS: B   PTS: 1   DIF: L2   REF: p. 307
     OBJ: 10.3.1   STA: Ch.3
169. ANS: B   PTS: 1   DIF: L3   REF: p. 111
     OBJ: 4.3.2   STA: Ch.11.c
170. ANS: B   PTS: 1   DIF: L1   REF: p. 110
     OBJ: 4.3.1   STA: Ch.1.a
171. ANS: D   PTS: 1   DIF: L1   REF: p. 40
     OBJ: 2.1.2
172. ANS: A   PTS: 1   DIF: L1   REF: p. 546
     OBJ: 18.1.2   STA: Ch.8.c
173. ANS: B   PTS: 1   DIF: L2   REF: p. 360 | p. 361 | p. 362
     OBJ: 12.2.2   STA: Ch.3.d
174. ANS: C   PTS: 1   DIF: L2   REF: p. 324 | p. 325
     OBJ: 11.1.3   STA: Ch.3.a | Ch.3.e
175. ANS: C   PTS: 1   DIF: L3   REF: p. 800 | p. 804
     OBJ: 25.1.2 | 25.2.1   STA: Ch.11.d
176. ANS: C   PTS: 1   DIF: L2   REF: p. 597 | p. 598
     OBJ: 19.2.2   STA: Ch.5.d
177. ANS: A   PTS: 1   DIF: L2   REF: p. 552 | p. 553
     OBJ: 18.2.2   STA: Ch.9.a
178. ANS: C   PTS: 1   DIF: L1   REF: p. 42
     OBJ: 2.1.3
179. ANS: D   PTS: 1   DIF: L1   REF: p. 506
     OBJ: 17.1.1   STA: Ch.7.a
180. ANS: B   PTS: 1   DIF: L1   REF: p. 801
     OBJ: 25.1.2   STA: Ch.11.d
181. ANS: B   PTS: 1   DIF: L1   REF: p. 91
     OBJ: 3.4.2
182. ANS: B   PTS: 1   DIF: L1   REF: p. 507
     OBJ: 17.1.3   STA: Ch.7.d
183. ANS: D
     St. 7d

     PTS: 1
184. ANS: B   PTS: 1   DIF: L1   REF: p. 525
     OBJ: 17.3.2   STA: Ch.7.e
185. ANS: B   PTS: 1   DIF: L1   REF: p. 506
     OBJ: 17.1.1   STA: Ch.7
186. ANS: C   PTS: 1   DIF: L1   REF: p. 508
     OBJ: 17.1.3   STA: Ch.7.d
187. ANS: C   PTS: 1
188. ANS: B   PTS: 1   DIF: L1   REF: p. 509 | p. 510
     OBJ: 17.1.3   STA: Ch.7.d

189. ANS: D   PTS: 1   DIF: L1   REF: p. 505
     OBJ: 17.1.1   STA: Ch.7

190. ANS: B   PTS: 1   DIF: L2   REF: p. 531
     OBJ: 17.4.2   STA: Ch.7.d | Ch.7.e

191. ANS: A   PTS: 1

192. ANS: E   PTS: 1

193. ANS: B   PTS: 1

194. ANS: A   PTS: 1   DIF: Medium   REF: Section: 7.8
     OBJ: EK.1.B.2

195. ANS: A   PTS: 1   DIF: Medium   REF: Section: 7.9
     OBJ: EK.1.B.2

196. ANS: A   PTS: 1

197. ANS: D   PTS: 1

198. ANS: C   PTS: 1   DIF: L2   REF: p. 139
     OBJ: 5.3.1   STA: Ch.1.j

199. ANS: A   PTS: 1   DIF: L2   REF: p. 143
     OBJ: 5.3.3   STA: Ch.1.j

200. ANS: A   PTS: 1   DIF: L2   REF: p. 139
     OBJ: 5.3.1   STA: Ch.1.j

201. ANS: D   PTS: 1

202. ANS: A   PTS: 1

203. ANS: C   PTS: 1   DIF: Easy   REF: Section: 14.1
     OBJ: EK.6.A.3

204. ANS: B   PTS: 1

205. ANS: B
     5a

     PTS: 1

206. ANS: A
     8b

     PTS: 1

MULTIPLE RESPONSE

207. ANS: B, C   PTS: 1

208. ANS: B, C, E   PTS: 1

209. ANS: A, D   PTS: 1

210. ANS: A, D
     2f

     PTS: 1

211. ANS: A, B, C   PTS: 1

212. ANS: A, D   PTS: 1

PROBLEM

213. ANS:
B

PTS: 1

214. ANS:
B

PTS: 1