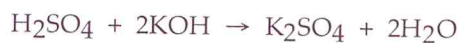


Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- C 1) A solution is prepared by dissolving 2 g of KCl in 100 g of H₂O. In this solution, H₂O is the
A) solid.
B) solute.
C) solvent.
D) solution.
E) ionic compound.
- D 2) When some of the sugar added to iced tea remains undissolved at the bottom of the glass, the solution is
A) unsaturated. B) polar. C) dilute. D) saturated. E) nonpolar.
- B 3) Rubbing alcohol is 70.% isopropyl alcohol by volume. How many mL of isopropyl alcohol are in a 1 pint (473 mL) container?
A) 0.15 mL B) 330 mL C) 680 mL D) 470 mL E) 70. mL
- C 4) What is the concentration, in *m/v%*, of a solution prepared from 50. g NaCl and 2.5 L of water?
A) 5.0% B) 2.0% C) 20.% D) 0.020% E) 0.050%
- B 5) The molarity (M) of a solution refers to
A) moles of solute/100 mL of solution.
B) moles of solute/L of solution.
C) grams of solute/L of solution.
D) grams of solute/100 mL of solution.
E) moles of solute/ L of solvent.
- A 6) What is the molarity of a solution containing 5.0 moles of KCl in 2.0 L of solution?
A) 2.5 M B) 2.0 M C) 5.0 M D) 10. M E) 1.0 M
- D 7) What volume of a 1.5 M KOH solution is needed to provide 3.0 moles of KOH?
A) 3.0 L B) 0.22 L C) 0.50 L D) 2.0 L E) 4.5 L
- E 8) During the process of diluting a solution to a lower concentration,
A) there is more solute in the concentrated solution.
B) water is removed from the concentrated solution.
C) the volume of the solution does not change.
D) the amount of solvent does not change.
E) the amount of solute does not change.
- C 9) What volume of a 2.00 M KCl solution is required to prepare 500. mL of a 0.100 M KCl solution?
A) 2.00 mL B) 1.00×10^4 mL C) 25.0 mL D) 5.00×10^2 mL E) 0.0400 mL

- C 10) A 25.0 mL sample of H_2SO_4 requires 20.0 mL of 2.00 M KOH for complete neutralization. What is the molarity of the acid?



- A) 1.60 M B) 2.00 M C) 0.800 M D) 1.25 M E) 2.50 M

- D 11) How many milliliters of 0.200 M NaOH are required to completely neutralize 5.00 mL of 0.100 M H_3PO_4 ?
A) 5.00 mL B) 0.833 mL C) 2.50 mL D) 7.50 mL E) 15.0 mL

Need balanced equation here!

- C 12) According to the kinetic theory of gases, a gas can be compressed much more than a liquid or solid because
A) gas particles move faster when the temperature increases.
B) a gas is composed of very small particles.
C) the particles of a gas are very far apart.

E) gas particles move rapidly.

- E 13) In the kinetic molecular theory of gas behavior, particles of a gas tend to move _____ and collisions between them are _____.

- A) slowly, elastic
B) slowly, rare
C) slowly, unusual
D) rapidly, rare
E) rapidly, elastic

- B 14) In response to Boyle's law, the pressure of a gas increases as the volume decreases because

- A) the kinetic energy of the gas particles increases.
B) the gas particles strike the walls of the container more often.
C) the temperature of the gas increases.
D) the gas particles strike the walls of the container with more force.
E) the gas particles get bigger.

- D 15) The pressure of 5.0 L of gas increases from 1.50 atm to 1240 mm Hg. What is the final volume of the gas, assuming constant temperature?

- A) 5.0 L B) 0.0060 L C) 4100 L D) 4.6 L E) 5.4 L

- E 16) A gas contained in a steel tank has a pressure of 1.5 atm at a temperature of 320 K. What will be the gas pressure when the temperature changes to 450 K?

- A) 0.94 atm B) 1.1 atm C) 0.47 atm D) 1.5 atm E) 2.1 atm

E 17) At STP, temperature and pressure have the values of

- A) 0 K and 1 atm.
- B) 273 K and 1 mm Hg.
- C) 760 K and 273 atm.
- D) 0 K and 760 mm Hg.
- E) 273 K and 760 mm Hg.

C 18) At STP conditions, 11 g of SO_2 have a volume of

- A) 22 L.
- B) 0.0076 L.
- C) 3.8 L.
- D) 130 L.
- E) 250 L.

B 19) According to the Arrhenius concept, if HNO_3 were dissolved in water, it would act as

- A) a source of H^- ions.
- B) an acid.
- C) a base.
- D) a proton acceptor.
- E) a source of hydroxide ions.

C 20) Which one of the following is characteristic of a base?

- A) has a sour taste
- B) turns blue litmus red
- C) has a slippery, soapy feel
- D) produces H_3O^+ in water
- E) is insoluble in water