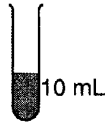
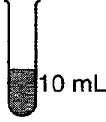
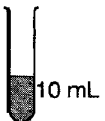
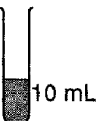


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1. Which compound is insoluble in water?
- (A) KOH (B) NH_4Cl
(C) Na_3PO_4 (D) PbSO_4
2. A gas sample is at 25°C and 1.0 atmosphere. Which changes in temperature and pressure will cause this sample to behave more like an ideal gas?
- (A) decreased temperature and increased pressure
(B) decreased temperature and decreased pressure
(C) increased temperature and increased pressure
(D) increased temperature and decreased pressure
3. The isotopes K-37 and K-42 have the same
- (A) decay mode
(B) bright-line spectrum
(C) mass number for their atoms
(D) total number of neutrons in their atoms
4. Which element is present in all organic compounds?
- (A) carbon (B) hydrogen
(C) nitrogen (D) oxygen
5. Each of four test tubes contains a different concentration of HCl(aq) at 25°C . A 1-gram cube of Zn is added to each test tube. In which test tube is the reaction occurring at the fastest rate?
- (A) 1 M HCl(aq) (B) 0.1 M HCl(aq)
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- (C) 0.01 M HCl(aq) (D) 0.001 M HCl(aq)
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6. Which energy conversion occurs during the operation of an electrolytic cell?
- (A) chemical energy to electrical energy
(B) electrical energy to chemical energy
(C) nuclear energy to electrical energy
(D) electrical energy to nuclear energy
7. Which compound is an Arrhenius acid?
- (A) CaO (B) HCl (C) K_2O (D) NH_3
8. Based on the results of testing colorless solutions with indicators, which solution is most acidic?
- (A) a solution in which bromthymol blue is blue
(B) a solution in which bromcresol green is blue
(C) a solution in which phenolphthalein is pink
(D) a solution in which methyl orange is red
9. According to one acid-base theory, water acts as an acid when an H_2O molecule
- (A) accepts an H^+ (B) donates an H^+
(C) accepts an H^- (D) donates an H^-
10. In which type of reaction is an atom of one element converted to an atom of a different element?
- (A) decomposition (B) neutralization
(C) saponification (D) transmutation
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