

## Ch. 6 Practice Questions

- 1) How many atoms are in 5.80 moles of He?
  - A)  $3.49 \times 10^{24}$
  - B)  $1.03 \times 10^{23}$
  - C)  $6.02 \times 10^{23}$
  - D) 4.00
  - E) none of the above
- 2) How many atoms are in 1.50 moles of fluorine gas?
  - A) 18.98
  - B)  $9.03 \times 10^{23}$
  - C)  $6.022 \times 10^{23}$
  - D)  $1.81 \times 10^{24}$
  - E) none of the above
- 3) What is the mass of 0.560 moles of chlorine gas?
  - A) 127
  - B) 63.3
  - C) 39.7
  - D) 19.9
  - E) none of the above
- 4) You have 10.0 g each of Na, C, Pb, Cu and Ne. Which contains the largest number of moles?
  - A) Cu
  - B) C
  - C) Pb
  - D) Ne
  - E) Na
- 5) How many atoms are in 15.6 grams of silicon?
  - A) 438
  - B) 0.555
  - C)  $2.64 \times 10^{26}$
  - D)  $3.34 \times 10^{23}$
  - E) none of the above
- 6) What is the mass of  $1.56 \times 10^{21}$  atoms of magnesium in grams?
  - A) 0.0630
  - B) 0.142
  - C)  $4.72 \times 10^{-5}$
  - D)  $1.07 \times 10^{-4}$
  - E) none of the above
- 7) Calculate the molar mass of ammonium carbonate.
  - A) 78.05 g/mol
  - B) 96.09 g/mol
  - C) 112.09 g/mol
  - D) 88.05 g/mol
  - E) none of the above

- 8) How many molecules of nitrogen monoxide are in a 22.5 gram sample?
- A)  $7.33 \times 10^{23}$
  - B)  $5.86 \times 10^{23}$
  - C)  $4.06 \times 10^{23}$
  - D)  $4.51 \times 10^{23}$
  - E) none of the above
- 9) One mole of potassium sulfate contains:
- A) 1 mole of potassium.
  - B) 3 moles of potassium.
  - C) 4 moles of oxygen.
  - D) 2 moles of sulfur.
  - E) none of the above
- 10) An iron ore sample is found to be 35.00% Fe by mass. How many grams of ore are needed to obtain 454.0 grams of Fe?
- A) 1297
  - B) 350.0
  - C) 158.9
  - D) 295.1
  - E) none of the above
- 11) What is the mass percent of chlorine in hydrochloric acid?
- A) 70.1
  - B) 35.5
  - C) 97.2
  - D) 2.8
  - E) none of the above
- 12) Which of the following is already in its empirical formula?
- A)  $C_6H_6$
  - B)  $C_5H_{12}O_2$
  - C)  $C_{22}H_{34}O_{10}$
  - D)  $C_6H_{12}O_3$
  - E) none of the above
- 13) Determine the correct empirical formula of a compound containing 26.68% carbon, 2.24% hydrogen, and 71.08% oxygen.
- A) CHO
  - B)  $CHO_2$
  - C)  $C_2H_2O_4$
  - D)  $C_{0.5}H_{0.5}O_1$
  - E) none of the above

- 14) What is the molecular formula of a compound given the molar mass of the compound is 186.5 gram and the empirical formula is  $C_2H_7$ ?
- A)  $C_2H_{14}$
  - B)  $C_4H_{14}$
  - C)  $C_2H_7$
  - D)  $C_3H_{21}$
  - E) none of the above

Answer Key

Testname: PRACTICEQ\_CH06

- 1) A
- 2) D
- 3) C
- 4) B
- 5) D
- 6) A
- 7) B
- 8) D
- 9) C
- 10) A
- 11) C
- 12) B
- 13) B
- 14) E