

CHM 151 Quiz 2a 25 Pts Fall 2010

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- e 1. What is the mass of 0.229 mol Mg?
 a. 24.5 g
 b. 106 g
 c. 9.42×10^{-3} g

$$\frac{0.229 \text{ mol} \times 24.3 \text{ g/mol}}{1 \text{ mol}} = 5.57 \text{ g}$$

*****There are more questions on the back*****

- d. 0.180 g
e 2. How many neutrons are in copper-63?
 a. 18
 b. 29
 c. 24
 d. 63
e 34

$$63 - 29 = 34$$

- a 3. How many moles are there in 5.00 g of AgNO₃?
 a. 0.0294 mol
 b. 34.0 mol

$$\frac{5.00 \text{ g}}{169.9 \text{ g/mol}} = 0.0294 \text{ mol}$$

- c. 5.00 mol
 d. 8.49 mol
 e. 0.00112 mol

- C 4. What is the mass percent of iron in iron(II) oxalate, FeC₂O₄?

- a. 61.18%
 b. 32.07%
c 38.82%
 d. 81.17%
 e. 14.29%

$$\frac{55.85}{143.87} \times 100 = 38.83\%$$

2	44	16.00	=	64.00
2	12.01		=	24.02
1	55.85		=	55.85
				<hr/> 143.87

- a 5. Which of the following atoms contains the largest number of protons?

- a. ¹⁷⁵Lu
 b. ¹³⁸Ba
 c. ¹²⁷I
 d. ¹⁴⁴Nd
 e. ¹⁵⁸Gd

$$175 - 71 = 104 \leftarrow$$

$$138 - 56 =$$

$$144 - 60 =$$

$$158 - 64 = 94$$

over

Name: Key

ID: B

d 6. What is the molar mass of nitroglycerine, $C_3H_5(ONO_2)_3$?

- a. 165.1 g/mol
- b. 41.07 g/mol
- c. 103.1 g/mol
- d.** 227.1 g/mol
- e. 204 g/mole

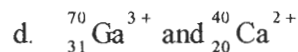
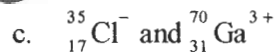
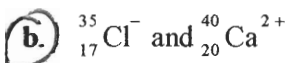
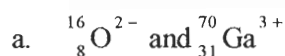
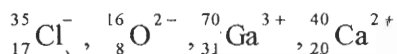
$$\begin{array}{l} 6 \times 16.00 \\ 3 \times 14.01 \\ 3 \times 16.00 \\ 5 \times 1.01 \\ 3 \times 12.01 \\ \hline 227.11 \end{array}$$

a 7. How many protons, neutrons, and electrons are in a carbon-13 atom?

- a.** 6 protons, 7 neutrons, 6 electrons
- b. 7 protons, 6 neutrons, 7 electrons
- c. 13 protons, 13 neutrons, 13 electrons
- d. 6 protons, 6 neutrons, 1 electron
- e. 7 protons, 6 neutrons, 6 electrons

$$13 - 6 = 7 \text{ neutrons}$$

b 8. Which two of the ions below have the same number of electrons?



e. none of the above

$$20 - 2 = 18$$

$$17 + 1 = 18$$