Chemistry 141 Name

Cary Willard

Quiz 1a (20 points) February 4, 2008

All work must be show to receive credit. Answers should be in scientific notation and to the correct number of significant figures.

1. (1 point) What is the name of NH4+?
2. (3 points) Perform the following calculation to the appropriate number of significant figures.

$$\left(97.4+12.973\right)÷0.0069983$$

1. (3 points) Tell the number of protons, neutrons, and electrons in .

Protons\_\_\_\_\_\_\_\_\_\_ neutrons\_\_\_\_\_\_\_\_\_\_\_ electrons\_\_\_\_\_\_\_\_\_\_\_\_

1. (4 points) In an engineering reference book, you find that the density of iron is 0.284 lb/in3. What is the density in g/cm3?
2. (3 points) An automobile gasoline tank holds 35 kg of gasoline. When the gasoline burns, 97 kg of oxygen is consumed and carbon dioxide and water are produced. What is the total combined mass of carbon dioxide and water that is produced?
3. (6 points) Professor Snape developed a new temperature scale to annoy Mr. Potter and his peers at Hogwarts. This new scale is called the Slytherin (oSs) and in this scale water freezes at 115oSs and boils at 495oSs. Determine the temperature in Professor Snape’s classroom (13oC) in degrees Slytherin.

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Quiz 1b (20 points) February 4, 2008

All work must be show to receive credit. Answers should be in scientific notation and to the correct number of significant figures.

1. (1 point) What is the name of NH4+?
2. (3 points) Perform the following calculation to the appropriate number of significant figures.

$$\left(83.4+42.973\right)÷0.0024887$$

1. (3 points) Tell the number of protons, neutrons, and electrons in .

Protons\_\_\_\_\_\_\_\_\_\_ neutrons\_\_\_\_\_\_\_\_\_\_\_ electrons\_\_\_\_\_\_\_\_\_\_\_\_

1. (4 points) In an engineering reference book, you find that the density of copper is 0.257 lb/in3. What is the density in g/cm3?
2. (3 points) An automobile gasoline tank holds 38 kg of gasoline. When the gasoline burns, 97 kg of oxygen is consumed and carbon dioxide and water are produced. What is the total combined mass of carbon dioxide and water that is produced?
3. (6 points) Professor Snape developed a new temperature scale to annoy Mr. Potter and his peers at Hogwarts. This new scale is called the Slytherin (oSs) and in this scale water freezes at 125oSs and boils at 495oSs. Determine the temperature in Professor Snape’s classroom (13oC) in degrees Slytherin.