Chemistry 141 Name

Dr. Cary Willard

Quiz 1A (20 points) February 2, 2010

1. (5 points) A sunscreen preparation contains 2.50% by mass benzyl salicylate. If a tube contains 4.0 oz of sunscreen, how many kilograms of benzyl salicylate are needed to manufacture 325 tubes of sunscreen?

2. (5 points) The density of titanium is 4.51 g/cm3. What is the volume in cubic inches of 3.5 lb of titanium?

2. (6 points) On a new Jekyll temperature scale, water freezes at 42oJ and boils at 384 oJ. On another new temperature scale, the Hyde scale, water freezes at 0oH and boils at 135oH. If methyl alcohol boils at 84oH, what is its boiling point on the Jekyll scale?

3. (4 points) Determine the number of protons, neutrons, and electrons and mass number for a 61V+3 ion.

Chemistry 141 Name

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Quiz 1B (20 points) February 2, 2010

1. (5 points) A sunscreen preparation contains 3.90% by mass benzyl salicylate. If a tube contains 4.0 oz of sunscreen, how many kilograms of benzyl salicylate are needed to manufacture 325 tubes of sunscreen?

2. (5 points) The density of titanium is 4.51 g/cm3. What is the volume in cubic inches of 4.5 lb of titanium?

2. (6 points) On a new Jekyll temperature scale, water freezes at 38oJ and boils at 284 oJ. On another new temperature scale, the Hyde scale, water freezes at 0oH and boils at 135oH. If methyl alcohol boils at 84oH, what is its boiling point on the Jekyll scale?

3. (4 points) Determine the number of protons, neutrons, and electrons and mass number for a 64Mn+6 ion.