

Name _____

5/29/08

Quiz #1

CHM 115

1) Classify each of the following as an element (A), a compound (B), a heterogeneous mixture (C), or a homogeneous mixture (D).

i) a chocolate chip cookie _____

ii) pure gold coin _____

2) Label the following characteristics of a sample as a physical property or a chemical property. (circle the answer)

Physical / Chemical : The sample is a silvery-white piece of metal.

Physical / Chemical : At 20°C the density of the metal is 1.738 g / cm³

3) Label the following processes as a chemical change or a physical change (circle the answer) :

Physical / Chemical : Warming a piece of metal in an oven

Physical / Chemical : Water condensing on a glass of ice tea in humid weather

4) Which of the following SI Units is named INCORRECT (circle the answer):

Physical Quantity	Name of Unit
Mass	Kilogram
Length	Meter
Time	Second
Temperature	Celsius
Electric current	Ampere

5) Which of the following SI prefixes is defined INCORRECTLY (circle the answer):

Prefix	Meaning
Milli-	10 ⁻³
Kilo-	10 ³
Deci-	10 ⁻¹
Centi-	10 ²
Nano-	10 ⁻⁹
Micro-	10 ⁻⁶

*Bonus (0.5 pts) : Within one order of magnitude, what is the diameter of a carbon nanotube?

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Quiz #1

CHM 115

1) Classify each of the following as an element (A), a compound (B), a heterogeneous mixture (C), or a homogeneous mixture (D).

i) water _____

ii) vodka _____

2) Label the following characteristics of a sample as a physical property or a chemical property. (circle the answer)

Physical / Chemical : The sample burns in air with a brilliant white flame.

Physical / Chemical : It reacts with bromine gas to give a brittle white solid.

3) Label the following processes as a chemical change or a physical change (circle the answer) :

Physical / Chemical : After exposure to water, the grey metal becomes orange and brittle

Physical / Chemical : The metal bursts into flames when in contact with water.

4) Which of the following SI prefixes is defined INCORRECTLY (circle the answer):

Prefix	Meaning
Milli-	10^{-3}
Centi-	10^2
Deci-	10^{-1}
Kilo-	10^3
Nano-	10^{-9}
Micro-	10^{-6}

5) Which of the following SI Units is named INCORRECT (circle the answer):

Physical Quantity	Name of Unit
Mass	Kilogram
Length	Meter
Temperature	Celsius
Electric current	Ampere
Time	Second

*Bonus (0.5 pts) : Within one order of magnitude, what is the diameter of a carbon nanotube?