Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 9:30 am Form A quiz # ____ green

Name Key (print name) Name _____ (sign name)

Please show all work for full credit. "Confidence Booster"

1 Which of the following is a compound ? Circle all compounds. You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (5 pts)

$H_2$ (Na Cl) S (CO) Pt

wrote ok. 1000g = 1 Kg

2 What conversion factor can you write to convert g to Kg ? Please write 2 possible conversion factors in the form of a numerator and denominator for both (a) & (b). (5 pts, 2.5 pts each)

no units -1

1000 Kg = 1 g -1

(a) $\frac{1000\,g}{1\,Kg}$ (b) $\frac{1\,Kg}{1000\,g}$

3 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (Show work.) (4 pts)

324.56 – 17.2 + 22.502 = 329.862 final number = 329.9

329.8 + round up to 329.9

324.56
− 17.2
+ 22.502
329.862

-2 attempt Rounding error -1

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

-3 attempt bad attempt -4

92.5 milliliters to gallons (1 liter = 1.06 quart, 4 quarts = 1 gallon)

2pt 2pt 1pt

$92.5\ ml \times \frac{1\ liter}{1000\ ml} \times \frac{1.06\ quart}{1\ liter} \times \frac{1\ gallon}{4\ quart} =$

0.0245 gallons or $2.45 \times 10^{-2}$ 1pt

-1 math

sig fig - no pts off

Extra Credit (4 pts)

Using the periodic table, for the element **N** give: atomic mass 14.01 atomic number 7

number of protons 7 number of electrons 7

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 9:30 am Form B quiz # _____

Name Key (print name) Name _____ (sign name)

Please show all work for full credit. "Confidence Booster"

1 Which of the following is an elements ? Circle all elements. You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (5 pts)

wrote 100cm = 1m

$H_2$ Na Cl S CO Pt

2 What conversion factor can you write to convert cm to m ? Please write 2 possible conversion factors in the form of a numerator and denominator for both (a) & (b). (5 pts, 2.5 pts each)

no units -1

100 m = 1 cm -1

(a) $\frac{100\ cm}{m}$ (b) $\frac{m}{100\ cm}$

3 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (Show work.) (4 pts)

(324.56 / 17.2) * 22.502 = 424.607507 final number = 425

-2 attempt

rounding error -1

5 sig fig / 3 sig fig → 5 sig fig → 3 sig fig

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

attempt -3

bad attempt -4

13.7 feet to kilometers (1 inch = 2.54 cm, 12 inches = 1 foot)

$13.5\ \cancel{ft} \times \frac{12\ \cancel{inches}}{1\ \cancel{foot}} \times \frac{2.540\ \cancel{cm}}{1\ \cancel{inch}} \times \frac{1\ m}{100\ \cancel{cm}} \times \frac{km}{1000\ \cancel{m}}$

1pt 1pt 1pt 2pt

$= 4.11 \times 10^{-3}\ km$

1pt

-1 math

sig fig - no pts off

Extra Credit (4 pts)

Using the periodic table, for the element **Cl** give: atomic mass 35.5 atomic number 17

number of protons 17 number of electrons 17

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 10:30 am Form A quiz # _____

Name Key (print name) Name _____ (sign name) green

Please show all work for full credit. "Confidence Booster"

1 What conversion factor can you write to convert mL to L ? Please write 2 possible conversion factors in the form of a numerator and denominator (a) & (b). (4 pts, 2 pts each)

(a) $\frac{1000\ mL}{1\ L}$ (b) $\frac{1\ L}{1000\ mL}$ no units -1 1000L = 1mL -1

2 How many significant figures are in the following numbers ? (6 pts, 3 pts each)

0.0003 1 significant figures 12003 5 significant figures

3 Convert the following number into scientific notation. (assume the zeros are not significant but are only placeholders) (4 pts)

35200 $3.52 \times 10$ (4) wrong # -2

35,200. -2 attempt +1 rounding error

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show ~~no work, you will lose all points.~~ (6 pts)

-3 attempt -4 bad attempt

4.75 kilograms to pounds (453.6 grams = 1 pound)

$4.15\ \cancel{kg} \times \frac{1000\ \cancel{g}}{1\ kg} \times \frac{1\ lb}{453.6\ \cancel{g}} = 10.5\ lb$

1pt 2pt 2pt 1pt sig fig no pts off

Extra Credit (4 pts)

Using the periodic table, for the element **Ca** give: atomic mass 40.1 atomic number 20

number of protons 20 number of electrons 20

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 10:30 am Form B quiz # _____

Name Key (print name) Name _____ (sign name)

Please show all work for full credit. "Confidence Booster"

1 What conversion factor can you write to convert Km to m ? Please write 2 possible conversion factors in the form of a numerator and denominator by (a) & (b). (4 pts, 2 pts each)

(a) $\frac{km}{1000\ m}$ (b) $\frac{1000\ m}{km}$ NO units -1 1000 Km = 1 m

2 How many significant figures are in the following numbers ? (6 pts)

$2.34 \times 10^{-2}$ 3 significant figures 0.0410 3 significant figures

3. Convert the following scientific notation into a non scientific notation number. (4 pts)

$8.79 \times 10^{-3}$ 8.79 0.00879 gave 8,790 -2

rounding error -1

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer ~~but show no work,~~ you will lose all points. (6 pts) attempt -3 bad attempt -4

26.89 millimeter to miles (~~5280 feet = 1 mile~~, 12 inches = 1 foot, 1 inch = 2.54 cm)

$26.89\ mm \times \frac{1\ m}{1000\ mm} \times \frac{100\ cm}{1\ m} \times \frac{1\ inch}{2.54\ cm} \times \frac{1\ foot}{12\ inches} \times \frac{1\ mile}{5280\ ft} = 1.671 \times 10^{-5}\ miles$

1 pt 1 pt 1 pt 1 pt 1 pt 1 pt

Math -2 sig fig no pts off

Extra Credit (4 pts)

Using the periodic table, for the element **Ni** give: atomic mass 58.69 atomic number 28

number of protons 28 number of electrons 28

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 9:30 am Form A quiz # 4-6

Name _____ Name _____
(print name) (sign name)

Please show all work for full credit. "Confidence Booster"

1 Which of the following is a compound ? Circle all compounds. You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (5 pts)

$H_2$ Na Cl S CO Pt

2 What conversion factor can you write to convert g to Kg ? Please write 2 possible conversion factors in the form of a numerator and denominator for both (a) & (b). (5 pts, 2.5 pts each)

(a) _____ (b) _____

3 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (Show work.) (4 pts)

324.56 – 17.2 + 22.502 = 329.862 final number = _____

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

92.5 milliliters to gallons (1 liter = 1.06 quart, 4 quarts = 1 gallon)

Extra Credit (4 pts)

Using the periodic table, for the element **N** give: atomic mass _____ atomic number _____

number of protons _____ number of electrons _____

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 9:30 am Form B quiz # 4-7

Name _____ Name _____
(print name) (sign name)

Please show all work for full credit. "Confidence Booster"

1 Which of the following is an elements ? Circle all elements. You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (5 pts)

$H_2$ Na Cl S CO Pt

2 What conversion factor can you write to convert cm to m ? Please write 2 possible conversion factors in the form of a numerator and denominator for both (a) & (b). (5 pts, 2.5 pts each)

(a) _____ (b) _____

3 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (Show work.) (4 pts)

(324.56 / 17.2) * 22.502 = 424.607507 final number = _____

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

13.7 feet to kilometers (1 inch = 2.54 cm, 12 inches = 1 foot)

Extra Credit (4 pts)

Using the periodic table, for the element **Cl** give: atomic mass _____ atomic number _____

number of protons _____ number of electrons _____

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 10:30 am Form A quiz # 5-4

Name _____ Name _____
(print name) (sign name)

Please show all work for full credit. "Confidence Booster"

1 What conversion factor can you write to convert mL to L ? Please write 2 possible conversion factors in the form of a numerator and denominator (a) & (b). (4 pts, 2 pts each)

(a) _____ (b) _____

2 How many significant figures are in the following numbers ? (6 pts, 3 pts each)

0.0003 _____ significant figures 12003 _____ significant figures

3 Convert the following number into scientific notation. (assume the zeros are not significant but are only placeholders) (4 pts)

35200 _____

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

4.75 kilograms to pounds (453.6 grams = 1 pound)

Extra Credit (4 pts)

Using the periodic table, for the element **Ca** give: atomic mass _____ atomic number _____

number of protons _____ number of electrons _____

Quiz I General Chemistry I Lecture Fall 13 Dr. Hahn 20 pts 8/30 F 10:30 am Form B quiz # 5-2

Name _____ (print name) Name _____ (sign name)

Please show all work for full credit. "Confidence Booster"

1 What conversion factor can you write to convert Km to m ? Please write 2 possible conversion factors in the form of a numerator and denominator by (a) & (b). (4 pts, 2 pts each)

(a) _____ (b) _____

2 How many significant figures are in the following numbers ? (6 pts)

$2.34 \times 10^{-2}$ _____ significant figures 0.0410 _____ significant figures

3. Convert the following scientific notation into a non scientific notation number. (4 pts)

$8.79 \times 10^{-3}$

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

26.89 millimeter to miles (5280 feet = 1 mile, 12 inches = 1 foot, 1 inch = 2.54 cm)

Extra Credit (4 pts)

Using the periodic table, for the element **Ni** give: atomic mass _____ atomic number _____

number of protons _____ number of electrons _____