Pink

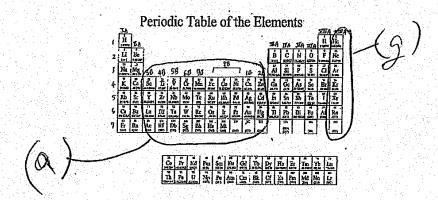
ıme	Kery	(print) Name	_(sign)
ultiple cho ork, I obv the exam	oice questions have no partial credit. riously cannot grade it. (2 pts print and and clearly tell me where the remaining	I lease whice the design of the design exameters of the lease continue on the design example. If you run out of space, please continue on the design example of the design example. $N_A = 6.022 \times 10^{23}$	e back pag
rt I MU	LTIPLE CHOICE. Choose the one alt	ternative that best completes the statement or answers the	question.
partial c	redit for MC. (2 pts per question, 24 p	ots total)	h
1\ Tc	sotopes differ in the number of		1) <u>- 开</u>
1) 10	A))neutrons.		
	B) beta particles.	이 보다면 하는데 보다 이번째 하는데 그런데 하나왔다	
	C) electrons.	한 경우에 생겼습니다. 그런 그램을 다면 된 기능을 받았다.	
	D) neutrons and protons	크림(Ban Maring) Bank (Banka) 글 (Banka) 글 전 요.	1
	E) protons.	~ 50	101
	E) protons.		10
OV T		or A) some	2)
2) H	dentify a liquid. A) no definite shape and definite vol	ume B) no definite shape and no definite volume	
	(C) definite volume and no definite sh		
	C) delitite volume and no delitite of		12
			3) <u>12</u>
3) 1	dentify a cation. A) An atom that has gained an electr		Market Service
	B) An atom that has lost an electron.		
	C) An atom that has gained a neutro		
	D) An atom that has lost a proton and	d a neutron	
	D) Attacont diac mas loss ap-	불가요한 시간 병원 시간 환경 보장이 되었다.	
4	A _t. Jout manforms an avneriment to f	letermine the density of a sugar solution. She obtains the	4)
4)	A student performs an experiment to a	., 1.67 g/mL, 1.69 g/mL. If the actual value for the density of	
I	to accomposition is 1.71 g/mil, 1.50 g/mil	statement below best describes her results?	
τ	A) Her results are both precise and a	occurate Com Lon	
	B) Her results are accurate, but not p	orecise. Far from true curate. hot ollwate)
	C) Her results are precise, but not ac	curate. h at sellingth	
	D) Her results are neither precise no	r accurate.	
	E) It isn't possible to determine with	the information given.	~
		그가 되는 사람들은 이 이렇게 하는 소문이다. 이번 때	
E/ .	The statement "In a chemical reaction	matter is neither created nor destroyed" is called	5)
ا(د	A) the Law of Multiple Proportions.		
	B) the Scientific Method.		
	the Law of Conservation of Mass		
. * . *	D) Dalton's Atomic Theory.		
	E) the Law of Definite Proportions.		
	E) the raw of Definite Liphornous.		

B) the attraction (C) the transfer of (D) the attraction	between 2 meta that holds the at	l atoms. (NOL oms together in a polone atom to another. netal atoms.		Lt hinmo	(hap)
7) Au is an example of A) a compound. C) a homogeneo		_	a heterogeneous m an element.	ixture.	n <u>D</u>
B) protons +1, n C) protons 0, ne D) protons 0, ne	eutrons –1, electi	rons 0 ins -1 ins -1 ins +1		↓ → (7 2)	8)
9) Predict the charge A) 6-	that a Mg ion wo	ould have. C) 2-	D) 2+	E) 1+	9)
10) How many signific	cant figures are ir	n the measurement 5.	340 g?		10)
A) 3	B) 2	C) 5	D) 1	E)4	
11) Which of the follow			D/ 1/-	(E) Fe	11) <u></u>
A) Br	B) S	C) As	D) Kr	U) Fe	
12) Which of the follow A) volume B) mass C) density D) None of the		es of intensive proper	_inde	perdent	12)
		of intensive properti			/

Part II Short Answer: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

1.	(Circle the follow	wing which	is an element	(not a c	ompound).	(8 pts total, 2 pts	each)
	(N	Ag) N	ΙO ₂	KCl		SO ₂		Coul 001 14
2.	F	ill in the blank	s. (6 pts to	tal, 3 pts each)				(300,001/t
							(000	
ε	_	1000	mg	= 1 gram	b.	1 meter =	[000]	millimeters
3 elen	Fient	For the following symbol. (6 pts	g symbols g total, 3 pts	ive the elemer each)	nt name.	For the fol	lowing element n	ame, write down the
		~ 1 d		boro		a		
Au		5010 _		0010	11			(NK)
	1. (Given the follow	ving block o	lirectly from th	ne period	lic table, (8	pts, 1 pt each)	98
Al							pts, 1 pt each)	Al
					((xx)	6	26,981538
	a. \	Write the symbo	ol for the ele	ment in the fo	rm of	$\frac{1}{x}$	BAL	
	b. I	How many prot	ons ?	c. Howr	nany ele	ctrons (for a	neutral atom)?_	13
	c. 1	What is the cha	rge on the e	ement as an io	in?-	g expla	in or show work.	Gave 513V
		group ?	IA —)	+3		CNI	W=-L)	gavesign - 2)
	d.	How many ne	utrons?	4_(show wo	ork) Z	17-13	= 14 N	$\frac{W}{23}$
	e. I	How many ator	ns does one	mole of the el	ement co	ontain(3.0L2 X1	<u>U </u>
	f.]	How much doe	s one atom	of the element	weigh _	26.98	amu 59	ave 27 OK
	g.	How much doe	s one mole	of the element	weigh	26.98	grams L	٥۴
Dr.	Hah	n General C	hemistry I I	ecture Exam	n I Fal	1 2014 for	m (9:30MWF for	m A) page 3

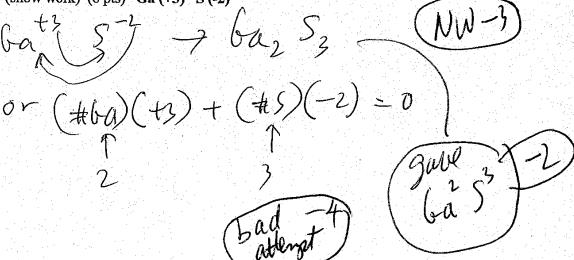
- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
- (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are ionic (1 pt each, 6 pts total)



9 Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) Ga (+3) S (-2)



Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (9:30MWF form A) page 4

Part III. Long Answer Please show work for full credit and to receive partial credit. (26 pts)

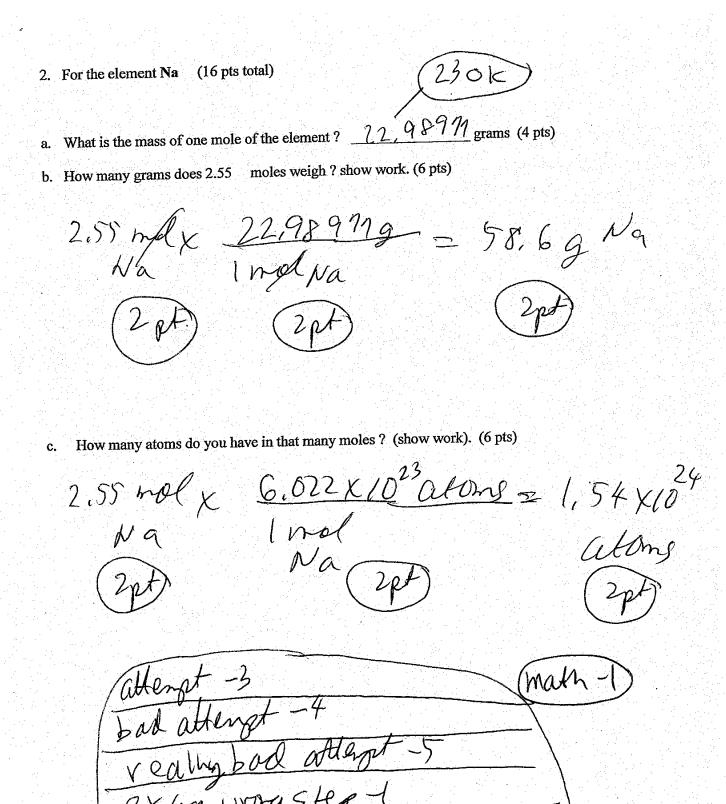
**** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite
the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1. Conversion Problem: (show work) (10 pts)

Convert 78.2 ounces to milligrams. (16 ounces = 1 pound, 453.59 grams = 1 pound)

2,22 ×106



Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (9:30MWF form A)

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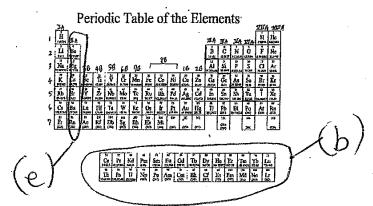
Name	Kely	(print) Name	(sign)
Please show work Multiple choice q work, I obviousl	k for partial credit and full credit questions have no partial credit. ly cannot grade it. (2 pts print ar	on the Long Answers and in some of the Short Answer	I cannot read your
Part I MULTIP	LE CHOICE. Choose the one a t for MC. (2 pts per question, 24	ternative that best completes the statement or answers total)	ers the question.
	an example of		1)
•	n homogeneous mixture.	B) a compound.	
•	heterogeneous mixture.	(D) an element.	
follow the su A) I B) I (C) I	ing results: 1.71 g/mL, 1.73 g/ml	ccurate curate.	the 2) C
	It isn't possible to determine with		
E) 1	it isn't possible to determine with	THE RECOMMENDED	
A) t B) t C) D) l	atement, "In a chemical reaction, the Scientific Method. the Law of Multiple Proportions. the Law of Conservation of Mass Dalton's Atomic Theory. the Law of Definite Proportions.	matter is neither created nor destroyed" is called	3)
4) Identi	fy a cation.		4) 15
A) (B) (C) (A) (B) (A) (A) (B) (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	An atom that has gained an elect An atom that has lost an electron An atom that has gained a neutr	on.	
D) .	An atom that has lost a proton ar	d a neutron.	
A) (fy a liquid. definite volume and definite sha no definite shape and no definite		ne J Same
A) j B) l O) i	oes differ in the number of protons. beta particles. neutrons. neutrons and protons. electrons.		6) <u>C</u>

7) How many significant figures are in the measurement 5.340 g?							
A) 5	B) 2	C) 3	D) 1	(E))4			
	ct charges of the p neutrons –1, electr neutrons 0, electro	ons 0	l electrons.		8) <u>D</u>		
C) protons 0, n	eutrons +1, electro	ns –1					
	neutrons 0, electro eutrons –1, electro				h		
A) density B) volume C) mass D) None of the	above are exampl	s of intensive proper es of intensive prope of intensive properti	rties.		9)/+		
10) Which of the follo	owing elements is a	a metal?			10)		
(A) Fe	B) S	C) Kr	D) Br	E) As	~		
11) Predict the charge	e that a Mg ion wo	uld have.			11)		
A) 6-	B) 3+	C) 2-	D) 1+	(E))2+	10		
B) the attraction C) the sharing D) the transfer	on between 2 metal on that holds the at of electrons.	oms together in a pol one atom to another.			12)		

<u>Part II Short Answer</u>: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

1.	Circle the following which is a Compound (not an element) (8 pts total, 2 pts each)
	Mg NO ₂ KCI SO ₂ II SO ₂ Fill in the blanks. (6 pts total, 3 pts each) 60 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2.	Fill in the blanks. (6 pts total, 3 pts each) 0.01) 1 liter =
a.	1 liter = $\frac{100}{100}$ centiliter $\frac{1000}{100}$ milliliter = liters
3.	For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each)
Mang	element symbol. (6 pts total, 3 pts each) Fanese Mn F fluoribe
4. As	Given the following block directly from the periodic table, (8 pts, 1 pt each) AS 74,92160
a.	Write the symbol for the element in the form of ${}^{\wedge}_{z} X = {}^{\wedge}_{32} A = {}^{\wedge}_{32} A$
b.	How many protons? $\frac{32}{2}$ c. How many electrons (for a neutral atom)? $\frac{23}{2}$
d.	What is the charge on the element as an ion? $\frac{-3}{-8}$ explain or show work. $948-97$ from $5-8=-3$ $849-97$ from $5-8=-3$ $849-97$ from 5
e	How many neutrons? $\frac{4L}{L}$ (show work) $\frac{15-53}{L} = \frac{4L}{L} = \frac{1}{2}$
f	How many atoms does one mole of the element contain $\frac{23}{6022}$
g	How much does one atom of the element weigh <u>74, 92</u> amu
h Dr H	How much does one mole of the element weigh 14,92 grams

- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
- (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements
- (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases

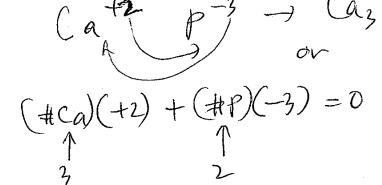


8 Given the following list of chemical formulas, circle all which are covalent (1 pt each, 6 pts total)

Na Cl

- P_2O_5
- (SO_2)
- MgF_2
- NO₂
- KBr

9 Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) Ca (+2) P (-3)



(gare (a³ p² -2) <u>Part III. Long Answer</u> Please <u>show work</u> for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1.	Conversion Problem: (show work) (10 pts)
Conv	rert 78.2 feet to meters. (12 inches = 1 foot, 2.54 cm = 1 inch) 18.2
	23,8 meters
	(2pt)
	attempt -4 bad attempt-6
	really bad attempt -8)
	math 1
	extra wray step
	Upside deun step 1
	stephalf wrong (topor bottom) -1)

2. For the element P (16 pts total)	
a. What is the mass of one mole of the element? 30,97 grams (4 pts)	
b. How many grams does 82.2 moles weigh? (show work.) (6 pts) $ \begin{array}{ccccccccccccccccccccccccccccccccccc$) 134
4 sigfig 2.55 x 103 g.P	
c. How many atoms do you have in that many moles? (show work). (6 pts)	
82.2 Holx 6.022 X10 ²³ atoms P=	?
PINOLP	
4,95 × 10 ²⁵ atoms P	
(2pt)	
sol attempt -4	
ball attempt -4	
really bod attempt -5 extra wrong step-1 upside dam step-1	
extra wrong 1. 3	
Step half wrong (top or bottom)	
Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (9:30MWF form B)	page

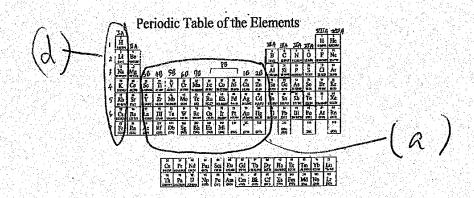
me	Kly	<u> </u>	(print) Name_	(14.1) 20. 20년 (17.1) 20. <u>1882 20. 21.</u> 20년 (17.1) 1883 (17.2) 20. 20. 20. 20.	1931 - Ngara Bandara 1931 - Nasara Bandara	(sign)
ltiple choic rk, I obvic	vork for partial credit ce questions have no p ously cannot grade it. nd clearly tell me who	and full credit partial credit. (2 pts print an	on the Long Answ Please write anyt d sign exam) If y	ers and in some of t hing you want grad ou run out of space	the Short Answer C led legibly. If I ca , please continue o	nnot read you
	TIPLE CHOICE. Cho edit for MC. (2 pts pe			completes the stat	lement or answers	the question.
1\Δ.	student performs an e	experiment to d	letermine the dens	ity of a salt solution	. She obtains the	1) <u>C</u>
foll	owing results: 1.79 g/	mL, 1.81 g/mL	, 1.80 g/mL, 1.81 g/	mL. If the actual va	alue for the density	of
the	salt solution is 1.80 g	mL) which stat	tement below best	describes her result	s?	
1	A) Her results are acco	urate, but not p	recise.	(C) 050	to all	ulo
	B) Her results are neit			(Ulle	New	May
))Her results are both			\ au	Wel)	하고 있는 이 원칙을 받아 이 한 독일 기업 등을 하고
T	() Her results are pre	cise, but not ac	curate.			
	E) It isn't possible to d	letermine with	the information gr	ven.		
						n 12
2) Ide	ntify a solid.	1.0	t (PV	latinita valuma and	dafinita chana	<i></i>
I	A) no definite shape a C) no definite shape a	na no demute	volume D)	leffille volume and	no definite shape	
	_) no dennite snape a	na aemate voi	son			
0\ T4H						3) (
the stage feet and	iich of the following a A) odor	re examples of	1 2 2 2 2 2 3 4 4 5 4 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5			
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	B) density		1000	OF TO		
The second of th	C) color		Olegen	lest or)	
	O) temperature		10	mound	3/	
	É))mass			<u>~`</u>		
						Λ
4) Ide	ntify the correct descr	ription of an ato	om.			4)
(7	A))protons and neutro	ons in nucleus;	electrons in orbitals			
	B) protons and electro	ons in nucleus;	neutrons in orbital:			
	C) neutrons in nucleu					
	D) neutrons and elect					
	E) electrons in nucleu	s; protons and	neutrons in orbital			\sim
						E, C
	nich of the following e	the contract of the contract o	nmetal:	D) K	E) Ce	<i>y</i>
	A) Ni	3) Be	$\mathcal{O}_{\mathbf{p}_{\mathbf{I}}}$		b) Ce	
,						6 1
	ntify an anion.	ant a northan a	ad a proton			, , , , , , , , , , , , , , , , , , ,
	A) An atom that has le B) An atom that has g	Appropriate the second of the				
	An atom that has leading that ha					
\hat{G}	An atom that has g					
	1	'				

7) H ₂ O is an exam	ple of				カ _	<u>#</u> _
(A))a compou	당시 그 사람들은 생물을 가고 있다.		B) a heterogeneous n	nixture.		
C) a homoger	neous mixture.		D) an element.			
						\wedge
8) Predict the char	ge that an ion form	ned from Se would	have.		8) _	
A) 1-	B) 3-	C) 6+	(D))2- \	E) 4+		
			\sim			<u>_</u>
9) Which of the fol	lowing exists as a	diatomic molecule?	(3	6-8	A ³ (9) -	
A) krypton			0		' 」)	
B) lithium				6-8-	-i /	
C) phosphore	1S		그런 경기가 없다.		ン	
D) carbon						
(E) hydrogen						
10) TT	• C C	: 0 00522080-m1 2			10)	
10) How many sign	B) 7	111 0.00025980 III.s.	D) 4	E) 3		
A) 5						4
11) A covalent bond	l is best described	as			11)	_15_
	er of electrons.					
(m)		veen atoms.				
() a bond be	tween two polyato	omic ions. U)	diz.			
D) a bond be	tween a metal and	a nonmetal.	10nic			
		l a polyatomic ion. —				
						\mathbf{n}
12) In a chemical re	action, matter is n	either created or des	troyed. Which law do	oes this refer to?	12)	<i>レ</i>
	finite Proportions					
	odern Atomic The					
	of Thermodynami					
	Conservation of					
E) Law of M	ultiple Proportions					

Part II Short Answer: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

1. Circle the following which is an element. (not a Compound) (8 pts total, 2 pts each) CO2 Fe Sr Br2 O2 2. Fill in the blanks. (6 pts total, 3 pts each) a. LOOO mL = 1 liter Glove ob b. 1 meter = LOO cm 3 For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each) Zn Zih C oxygen Oxygen Oxygen Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of Ax Sp	me to	grade it, clearly indicate where I can thin your work.
2. Fill in the blanks. (6 pts total, 3 pts each) a. \[\left(\text{DOO} \text{ mL} = 1 \] liter \[\text{ONDOOD} \] b. \[1 \] meter = \[\left(\text{DO} \text{ cm} \] cm 3 For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each) 2 \[\text{C} \] \text{oxygen} \[\text{O} \] 4. Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of \[\frac{\text{N}}{\text{2}} \] b. How many protons? \[\frac{\text{2}}{\text{C}} \] c. How many electrons (for a neutral atom)? \[\frac{\text{35}}{\text{500}} \] c. How many neutrons? \[\frac{\text{4}}{\text{5}} \] (show work) 8 \[\text{0} \] -\frac{\text{5}}{\text{5}} \] f. How many atoms does one mole of the element weigh \[\frac{\text{79.90}}{\text{90}} \] h. How much does one mole of the element weigh \[\frac{\text{79.90}}{\text{90}} \] h. How much does one mole of the element weigh \[\frac{\text{79.90}}{\text{79.90}} \] grams	1.	Circle the following which is an element . (not a Compound) (8 pts total, 2 pts each)
a. LOOO mL = 1 liter GWOOD b. 1 meter = LOO cm For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each) Zn Zih C oxygen O 4. Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of AX AY b. How many protons? 25 c. How many electrons (for a neutral atom)? 75 d. What is the charge on the element as an ion? 28 e. How many neutrons? 45 (show work) 80 -75 = 45 NW D f. How many atoms does one mole of the element contain g. How much does one atom of the element weigh 79,90 amu h. How much does one mole of the element weigh 79,90 grams C SW SOOK)		CO_2 Fe $Sr Br_2$ O_2 O_2
For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each) Zn ZhC oxygen Oxygen Oyen 4. Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of Ax Ayen b. How many protons? A c. How many electrons (for a neutral atom)? d. What is the charge on the element as an ion? Ayen explain or show work of the element of the element contain of the element contain of the element contain of the element weigh 19,90 amu h. How much does one mole of the element weigh 19,90 amu grams oxygen Oxygen Oxygen 19,90 10,	2.	Fill in the blanks. (6 pts total, 3 pts each)
For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each) Zn ZhC oxygen Oxygen Oyen 4. Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of Ax Ayen b. How many protons? A c. How many electrons (for a neutral atom)? d. What is the charge on the element as an ion? Ayen explain or show work of the element of the element contain of the element contain of the element contain of the element weigh 19,90 amu h. How much does one mole of the element weigh 19,90 amu grams oxygen Oxygen Oxygen 19,90 10,	a.	$\frac{1000 \text{ mL} = 1 \text{ liter} \left(3000000000000000000000000000000000000$
4. Given the following block directly from the periodic table, (8 pts, 1 pt each) Br a. Write the symbol for the element in the form of AX Br 79.904 b. How many protons? 25 c. How many electrons (for a neutral atom)? 35 Br 79.904 d. What is the charge on the element as an ion? explain or show work NW F 9.009 TF A P = 1 e. How many neutrons? 45 (show work) 80 -95 = 45 NW F f. How many atoms does one mole of the element contain g. How much does one atom of the element weigh 79.90 amu h. How much does one mole of the element weigh 79.90 grams 2 SW 80 OX		For the following symbols give the element name. For the following element name, write down the
a. Write the symbol for the element in the form of ${}^{\wedge}\chi$ ${}^{\circ}\chi$ ${}^{$	Zn	$\frac{Zihc}{\sqrt{990}}$ oxygen $\frac{O}{\sqrt{990}}$
a. Write the symbol for the element in the form of $^{\wedge}X$ $^{\wedge}X$ $^{\wedge}Y$ $^{\vee}Y$ $^{$	4.	Given the following block directly from the periodic table, (8 pts, 1 pt each)
b. How many protons? $\frac{2}{5}$ c. How many electrons (for a neutral atom)? $\frac{2}{5}$ d. What is the charge on the element as an ion? $\frac{1}{2-8}$ explain or show work $\frac{1}{2-8}$ e. How many neutrons? $\frac{4}{5}$ (show work) 6. How many neutrons? $\frac{4}{5}$ (show work) 7. F. How many atoms does one mole of the element contain $\frac{6}{5}$	Br	$\left(-1\right)_{1}80$
d. What is the charge on the element as an ion? $\frac{1}{2 - 8} = \frac{1}{2 - $	a.	Write the symbol for the element in the form of $\begin{bmatrix} x \\ z \end{bmatrix}$
e. How many neutrons? 45 (show work) f. How many atoms does one mole of the element contain 6,022 X10 Atoms g. How much does one atom of the element weigh 79,90 amu h. How much does one mole of the element weigh 79,90 grams 2 SWL 80 0X)		
e. How many neutrons? 45 (show work) f. How many atoms does one mole of the element contain 6,022 X10 Atoms g. How much does one atom of the element weigh 79,90 amu h. How much does one mole of the element weigh 79,90 grams 2 SWL 80 0X)	d.	What is the charge on the element as an ion? $\frac{1}{2-8} = 1$ explain or show work $\frac{1}{2-8} = 1$
f. How many atoms does one mole of the element contain 6000 x10 atoms g. How much does one atom of the element weigh 79,90 amu h. How much does one mole of the element weigh 79,90 grams	e.	How many neutrons? 45 (show work)
f. How many atoms does one mole of the element contain 6000 x10 atoms g. How much does one atom of the element weigh 79,90 amu h. How much does one mole of the element weigh 79,90 grams		80 - 35 = 45 (W-2)
h. How much does one mole of the element weigh 79.90 grams	f.	orionista in the second process of the contract of the second of the second of the second of the second of the
하다워 보다 사는 닭이들이 다른 하는 것이 들어가 되어 가는 학교들에서 나무를 하고 있습니다. 그는 학교들에 대한 아이를 모르게 하는 것이 가능한 것이다.	100	
		가게 눈탕 하다 가지, 하시는 것 같은 것이다. 가는 학교 학생들에 나무를 하는 것이다. 그는 것이다. 하지만 하는 것이다는 그들이 가는 것이다. 그렇다

- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
 - (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are ionic (1 pt each, 6 pts total)

CaCl₂ CO₂ Sr₃N₂ PCl₃ BaF₂ F₂

Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) B (+3) I (-1)

(3) (4) (4) (4) (-1) = 0 (4)

Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form A) page

Part III. Long Answer Please show work for full credit and to receive partial credit. (26 pts)

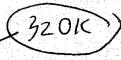
**** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1. Conversion Problem: (show work) (10 pts)

Convert 13.78 milliliters to cups (1 Liter = 1.0567 quarts, 4 cups = 1 quart) = 0,05825 cys 4 sigfigs attempt -4
bed attempt -6
roolly bad attempt -8 extra wrong step 1
upside down step 1
step half wrong (topox bottom)

- / -	 1. 4. 7.		and the second	/			
2.	For	the el	lement	S	(1	6 pts	total)



a. What is the mass of one mole of the element? 32,066 grams (4 pts)

b. How many grams does 0.278 moles weigh? show work. (6 pts)

0.278 molx <u>32.06695</u> = 8.9195 1mal (2nt)

How many atoms do you have in that many moles? (show work). (6 pts)

1.67 ×1023 alon

General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form A)

Dr. Hahn

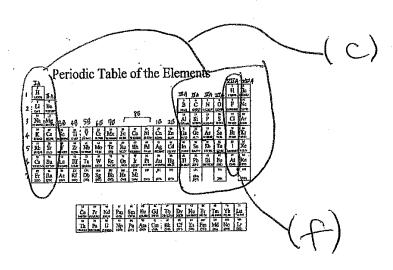
Exam :	General Chemistry	I Lecture Fal	1 2014 9/17/14	Wednesday	form 10:30 B	Dr. Hahn	Exam #
Jame_	Ke	W	(print)) Name			(sign)
Please s Multipl vork, I of the e	thow work for partial e choice questions ha obviously cannot gr xam and clearly tell r	credit and full ve no partial creade it. (2 pts pre ne where the re	credit on the Lo edit. Please w rint and sign exa emaining answe	ng Answers a vrite anything am) If you ro r can be found	nd in some of the you want grade un out of space 1. NA = 6.022	ne Short Answe ed legibly. If please continu x 10 ²³	e on the back page
Part I No par	MULTIPLE CHOIC tial credit for MC. (2	E. Choose the pts per questi	one alternative on, 24 pts total)	that best con	npletes the state	ement or answe	0
	1) How many signif A) 4	icant figures are	e in 0.00523980 r C) 7	nL?	D) 5	E) 3	1) <u>B</u>
	C) electrons in D) protons and	l neutrons in nu nucleus; protor nucleus; protor l electrons in nu	f an atom. cleus; electrons ns and electrons ns and neutrons ncleus; neutrons nucleus; protons	in orbitals in orbitals in orbitals			2) <u>A</u>
	3) A covalent bond: A) the transfer B) a bond bety C) a bond bety (D) the sharing	is best described of electrons. veen two polya	d as tomic ions. Id a polyatomic tween atoms.	÷			3) <u>D</u>
	4) Which of the followard C) temperature D) mass E) odor	owing are exam		e properties?			4)
	5) Predict the charge A) 3-	e that an ion fo	rmed from Se w C) 4	vould have.	D) 1-	E) 6+	5) <u>B</u>
	B) Law of Mu C) Law of Mo (D))Law of the	ction, matter is inite Proportion Itiple Proportion dern Atomic Th Conservation of Thermodynan	ns ns neory of Mass	or destroyed.	Which law doe	s this refer to?	6) <u>D</u>
	7) Which of the foll A) Ni	owing elements B) K		3r	D) Be	E) Ce	7) <u> </u>
	Dr. Hahn Genera	l Chemistry I L	ecture Exa	ım I F	all 2014	10:30 form B	page 1

8) Identify an anion.	8) <u>B</u>
A) An atom that has lost a neutron and a proton.	
(B) An atom that has gained an electron.	
C) An atom that has lost an electron.	
D) An atom that has gained a neutron.	
D) An atom that has gamed a heartsta	4
9) H ₂ O is an example of	9) [5
()	,
A) a homogeneous mixture. B) a compound. D) a hotography mixture.	
C) an element. D) a heterogeneous mixture.	
an right at a first translanda?	10)
10) Which of the following exists as a diatomic molecule?	10)
A) phosphorus	
B) carbon	
C) lithium	
D) krypton	
(E) hydrogen	^
	Δ
11) Identify a solid.	11) /丁
(A) definite volume and definite shape B) no definite shape and definite volume	
C) definite volume and no definite shape (D) no definite shape and no definite volume	
12) A student performs an experiment to determine the density of a salt solution. She obtains the	12)
following results: 1.79 g/mL, 1.81 g/mL, 1.80 g/mL, 1.81 g/mL. If the actual value for the density of	
the salt solution is 1.80 g/mL, which statement below best describes her results?	
A) Her results are precise, but not accurate.	
B) Her results are neither precise nor accurate.	
Her results are both precise and accurate	
D) Her results are accurate, but not precise.	
F) It isn't noscible to determine with the information given	

Part II Short Answer: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

1.	Circle the following which is a Compound (not element) (8 pts total, 2 pts each)
	CO_2 Fe $Sr Br_2$ O_2 Fill in the blanks. (6 pts total, 3 pts each)
2.	Fill in the blanks. (6 pts total, 3 pts each)
a.	$1 \text{ kilogram} = \underbrace{ \left(\begin{array}{c} 0 \\ 0 \\ 0 \end{array} \right)}_{\text{grams}} \qquad \text{b.} \qquad 1 \text{ km} = \underbrace{ \left(\begin{array}{c} 0 \\ 0 \\ 0 \end{array} \right)}_{\text{meters}} \text{ meters}$
3.	For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each)
Pt	platinum carbon C
4.	Given the following block directly from the periodic table, (8 pts, 1 pt each)
Be a.	Write the symbol for the element in the form of ${}^{\wedge}_{z}$ ${}^{\wedge}_{z}$ ${}^{\wedge}_{z}$
b.	How many protons? c. How many electrons (for a neutral atom)?
đ.	
e.	Grap II A $+2$ (Show work) How many neutrons? $+2$ (Show work) How many atoms does one male of the element contain $+6$ (22) $+6$ (23)
f.	How many atoms does one mole of the element contain 6002 400 atoms
g. h.	and Texame
Dr. H	Jahn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form B) page 3

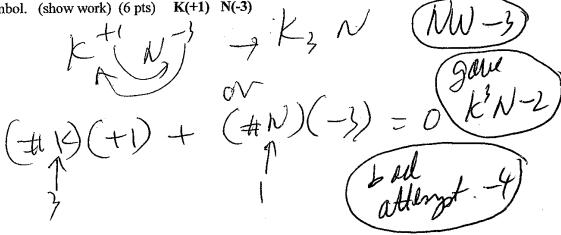
- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
 - (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are covalent (1 pt each, 6 pts total)

 $CaCl_2$ CO_2 Sr_3N_2 PCl_3 BaF_2 F_2

Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) K(+1) N(-3)



Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form B) page 4

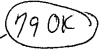
<u>Part III. Long Answer</u> Please <u>show work</u> for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1. Conversion Problem: (show work) (10 pts)

Convert 13.78 kilograms to ounces (453.59 grams = 1 pound, 16 ounces = 1 pound)	
$(2pt) \qquad (2pt) \qquad (2pt)$	(ZPA)
13,78 kg x 1000g x 1 pount x	160m
	1 0
= 486,10 unces	
2 pt)	
10 1-4	
attempt -4	
ad attempt to	
really bud attempt of	
math 1	\.\ \.
$n = a \mid a$	
extra wrong stept	
lune de donn step 1	
Stephal wrong (top or bottom) -1	

2.	For the element	Se	(16 pts total)
Z.	Lot me cicinent	136	(10 pts total)



a. What is the mass of one mole of the element? 78,96 grams (4 pts)

d. What is the mass of one mass of

b. How many grams does 0.0672 moles weigh? (show work.) (6 pts)

0,0672 mal x 18.96 g.Se = 5,31 g.Se Se 1 mal 2pt 2pt 2pt

c. How many atoms do you have in that many moles ? (show work). (6 pts)

0.0672 × 6.622×10° atoms Se

mil

Se

Se

4.05 ×10° atoms Se

Attempt

Yeally bad attempt

Extra wrong step 1

Up side down 7 tep 1

mod (step 12 wrong (top or bottom) -1

Dr. Hahn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form B)

page 6

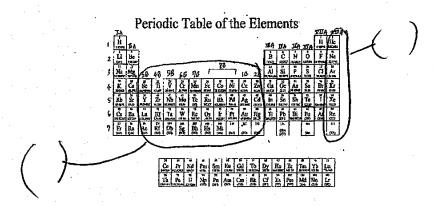
Name_	(print) Name	(sign)
Please	show work for partial credit and full credit on the Long Answers and in some of the Short Answer Ques	tions.
Multin	le choice questions have no partial credit. Please write anything you want graded legibly. If I canno	it read your
work,	I obviously cannot grade it. (2 pts print and sign exam) If you run out of space , please continue on tr	e back page
of the	exam and clearly tell me where the remaining answer can be found. $N_A = 6.022 \times 10^{23}$	
Part I	MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the	question.
No pa	rtial credit for MC. (2 pts per question, 24 pts total)	
	1) Isotopes differ in the number of	1)
	A) neutrons.	
	B) beta particles.	
	C) electrons.	
	D) neutrons and protons	
	E) protons.	
	2) Identify a liquid.	2)
	A) no definite shape and definite volume B) no definite shape and no definite volume	
	C) definite volume and no definite shape D) definite volume and definite shape	
	2) I double a pation	3)
	3) Identify a cation. A) An atom that has gained an electron.	,
	B) An atom that has lost an electron.	
	C) An atom that has gained a neutron.	
	D) An atom that has lost a proton and a neutron.	
	4) A student performs an experiment to determine the density of a sugar solution. She obtains the	4)
	following results: 1.71 g/mL, 1.73 g/mL, 1.67 g/mL, 1.69 g/mL. If the actual value for the density of	
	the sugar solution is 1.40 g/mL, which statement below best describes her results?	
	A) Her results are both precise and accurate	
	B) Her results are accurate, but not precise.	
	C) Her results are precise, but not accurate.	
	D) Her results are neither precise nor accurate.	
	E) It isn't possible to determine with the information given.	
	5) The statement, "In a chemical reaction, matter is neither created nor destroyed" is called	5)
	A) the Law of Multiple Proportions.	
٠	B) the Scientific Method,	
	C) the Law of Conservation of Mass.	
	D) Dalton's Atomic Theory.	
	E) the Law of Definite Proportions.	

6) An ionic bond is l					6)	
	n between 2 metal					
		oms together in a polya	tomic ion.			
		ne atom to another.				
	n between 2 nonm	etal atoms.				
E) the sharing	of electrons.					
					7)	
7) Au is an example		D) a	heterogeneous mix	tura	· //	
A) a compound			n element.	uic.		
C) a homogene	eous mixture.	D) al	i element.			
9) Idontify the gorro	et charges of the pr	otons, neutrons, and el	ectrons		8)	
	neutrons –1, electro		celiono.		-7	
	neutrons 0, electron					
	eutrons +1, electron					
	eutrons -1, electron					
7 🛋	neutrons 0, electro		•			
L) protono 1,	iteations by distance					
9) Predict the charg	e that a Mg ion wo	ıld have.			9)	
A) 6-	B) 3+	C) 2-	D) 2+	E) 1+		
7-7		•	•			
10) How many signif	ficant figures are in	the measurement 5.340	0 g?		10)	
A) 3	B) 2	C) 5	D) 1	E) 4		
		•				
11) Which of the follo	owing elements is a	metal?			. 11)	
A) Br	B) S	C) As	D) Kr	E) Fe	-	
1., 2.	-,-			•	٠	
12) Which of the follo	owing are examples	of intensive properties	s?		12)	
A) volume						
B) mass			*	4		
C) density			•			
	e above are example	es of intensive properti	es.			
		of intensive properties.				
-,						

Part II Short Answer: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

	Mg	NO ₂	KCl		SO_2		
. · .			s total, 3 pts ea	ch)			
a.			mg = 1 gram	b.	1 meter =		millimeters
lemei		llowing symbo (6 pts total, 3		nent name	. For the foll	owing element	name, write dow
			L .	~# ~			
Au				oron			
4. Al	Given the	following blo	ck directly fron	n the perio	dic table, (8	pts, 1 pt each)	13 Al 26.981538
a.	Write the	symbol for the	e element in the	form of	^A X		
b.	How man	y protons? _	с. Но	w many ele	ectrons (for a	neutral atom)?	
c.	What is t	he charge on th	ne element as ar	n ion ?	explai	n or show work	
d.	How ma	any neutrons?	(show	work)			
e.	How man	ny atoms does	one mole of the	e element c	contain		· · · · · · · · · · · · · · · · · · ·
			om of the elem	ent weigh	а	mu	•

- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
- (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are ionic (1 pt each, 6 pts total)

Na Cl

 P_2O_5

 SO_2

MgF₂

 NO_2

KBr

9 Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) Ga (+3) S (-2)

<u>Part III. Long Answer</u> Please <u>show work</u> for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1. Conversion Problem: (show work) (10 pts)

Convert 78.2 ounces to milligrams. (16 ounces = 1 pound, 453.59 grams = 1 pound)

- 2. For the element Na (16 pts total)
- a. What is the mass of one mole of the element? _____ grams (4 pts)
- b. How many grams does 2.55 moles weigh? show work. (6 pts)

c. How many atoms do you have in that many moles? (show work). (6 pts)

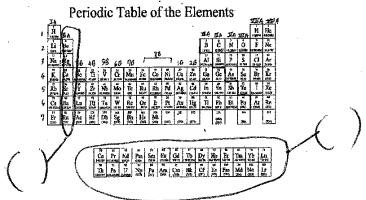
e(print)	Name	(sign)
se show work for partial credit and full credit on the Lo	ng Answers and in some of the Short Answer Ques	tions.
iple choice questions have no partial credit. Please w	rite anything you want graded legibly. If I canno	it read your
z, I obviously cannot grade it. (2 pts print and sign exa	im) If you run out of space , please continue on th	ne back pag
e exam and clearly tell me where the remaining answe		*
MULTIPLE CHOICE. Choose the one alternative	that best completes the statement or answers the	question.
partial credit for MC. (2 pts per question, 24 pts total)	·	1)
1) Au is an example of		1)
 A) a homogeneous mixture. 	B) a compound.	
C) a heterogeneous mixture.	D) an element.	
2) A student performs an experiment to determine	the density of a sugar solution. She obtains the	2)
following results: 1.71 g/mL, 1.73 g/mL, 1.67 g/m	L, 1.69 g/mL. If the actual value for the density of	
the sugar solution is 1.40 g/mL, which statement	below best describes her results?	
 A) Her results are neither precise nor accurate. 		
B) Her results are both precise and accurate		
C) Her results are precise, but not accurate.		
D) Her results are accurate, but not precise.		
E) It isn't possible to determine with the inform	nation given.	
3) The statement, "In a chemical reaction, matter is	neither created nor destroyed" is called	3)
A) the Scientific Method.		
B) the Law of Multiple Proportions.		
C) the Law of Conservation of Mass.		
D) Dalton's Atomic Theory.		
E) the Law of Definite Proportions.		
4) Identify a cation.		4)
A) An atom that has gained an electron.		
B) An atom that has lost an electron.		
C) An atom that has gained a neutron.		
D) An atom that has lost a proton and a neutro	on.	
5) Identify a liquid.		5)
A) definite volume and definite shape	B) no definite shape and definite volume	
C) no definite shape and no definite volume	D) definite volume and no definite shape	
6) Isotopes differ in the number of		6)
A) protons.		
B) beta particles.		
C) neutrons.		
D) neutrons and protons.		
E) electrons.		
· · · · · · · · · · · · · · · · · · ·		

7) How many sign	nificant figures are in	the measurement 5.3	340 g?		7)
A) 5	B) 2	C) 3	D) 1	E) 4	
8) Identify the cor	rect charges of the p	rotons, neutrons, and	electrons.		8)
A) protons +	1, neutrons -1, electr	ons 0			
B) protons -	1, neutrons 0, electro	ns +1			
C) protons 0	, neutrons +1, electro	ns –1		*	
	1, neutrons 0, electro				
	, neutrons –1, electro				
9) Which of the fo	ollowing are example	s of intensive propert	ies?		9)
A) density	•				
B) volume					
C) mass					
D) None of t	he above are exampl	es of intensive prope	rties.		
E) All of the	above are examples	of intensive propertie	es.		
10) Which of the fo	ollowing elements is a	a metal?			10)
A) Fe	B) S	C) Kr	D) Br	E) As	
 Predict the cha 	rge that a Mg ion wo	uld have.			11)
A) 6-	B) 3+	C) 2-	D) 1+	E) 2+	
12) An ionic bond	is best described as				12)
	tion between 2 meta	l atoms.			
		oms together in a pol	yatomic ion.		
•	ng of electrons.				
D) the trans	fer of electrons from	one atom to another.			
E) the attrac	ction between 2 nonn	netal atoms.			

<u>Part II Short Answer:</u> Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

1.		Circle the followi	ng which is a Co	mpound ((not an	element	t) (8 pts to	tal, 2 pts e	each)	
		Mg NO) ₂ KCl			SO ₂				
2.		Fill in the blanks.	(6 pts total, 3 p	ots each)						
	a.	1 liter =	centilite	er	b.		mi	liliter = li	ters	
3.	٠	For the following element symbol.	symbols give the (6 pts total, 3 pts	e element n each)	name.	For the f	ollowing e	lement na	me, write	down the
Ma	anga	anese		F						
As		Given the following	ng block directly	from the p	periodic	table,	(8 pts, 1 _. pt	each)	As 74.9216	0
	a.	Write the symbol	for the element i	n the form	of Ay	ζ	·			
	b.	How many protor	as? c.	How man	ny elect	rons (for	a neutral	atom) ?	·······	
	d.	What is the charg	e on the element	as an ion ?	?	exp	lain or sho	w work.		
										·
	е	How many neutron	ıs ? (sho	w work)						
	f	How many atoms	does one mole o	of the elem	ent con	tain				
	g	How much does	one atom of the e	element we	eigh		_ amu			
	h	How much does	one mole of the e	lement we	igh		_ grams			
Dı	r. Ha	ahn General Che	mistry I Lecture	Exam I	Fall	2014 f	form (9:30)	MWF forn	n B)	page 3

- 7 Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
- (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements
- (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are covalent (1 pt each, 6 pts total)

Na Cl

 P_2O_5

 SO_2

MgF₂

 NO_2

KBr

Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) Ca (+2) P (-3)

Part III. Long Answer Please show work for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

Conversion Problem: (show work) (10 pts) 1.

Convert 78.2 feet to meters. (12 inches = 1 foot, 2.54 cm = 1 inch)

- 2. For the element P (16 pts total)
 - a. What is the mass of one mole of the element? _____ grams (4 pts)
 - b. How many grams does 82.2 moles weigh? (show work.) (6 pts)

c. How many atoms do you have in that many moles? (show work). (6 pts)

	(print) Name	(sign)
Multipl work, I	show work for partial credit and full credit on the Long Answers and in some of the Short Answer Queed to choice questions have no partial credit. Please write anything you want graded legibly. If I cannot obviously cannot grade it. (2 pts print and sign exam) If you run out of space, please continue on the exam and clearly tell me where the remaining answer can be found. $N_A = 6.022 \times 10^{23}$	ot read your
	MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the tial credit for MC. (2 pts per question, 24 pts total)	question.
	1) A student performs an experiment to determine the density of a salt solution. She obtains the following results: 1.79 g/mL, 1.81 g/mL, 1.80 g/mL, 1.81 g/mL. If the actual value for the density of the salt solution is 1.80 g/mL, which statement below best describes her results?	1)
	A) Her results are accurate, but not precise. B) Her results are neither precise nor accurate. C) Her results are both precise and accurate	
	D) Her results are precise, but not accurate. E) It isn't possible to determine with the information given.	
	2) Identify a solid.	2)
	A) no definite shape and no definite volume C) no definite shape and definite volume D) definite volume and definite shape D) definite volume and no definite shape	
	3) Which of the following are examples of extensive properties? A) odor B) density	3)
	C) color D) temperature E) mass	
	4) Identify the correct description of an atom. A) protons and neutrons in nucleus; electrons in orbitals	4)
	B) protons and electrons in nucleus; neutrons in orbitals C) neutrons in nucleus; protons and electrons in orbitals	
	D) neutrons and electrons in nucleus; protons in orbitalsE) electrons in nucleus; protons and neutrons in orbitals	
	5) Which of the following elements is a nonmetal? A) Ni B) Be C) Br D) K E) Ce	5)
	 6) Identify an anion. A) An atom that has lost a neutron and a proton. B) An atom that has gained a neutron. C) An atom that has lost an electron. D) An atom that has gained an electron. 	6)

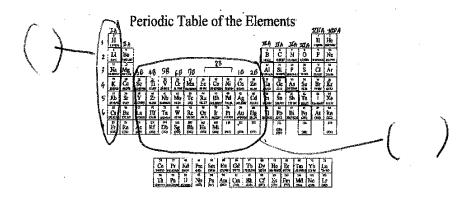
7) H ₂ O is an example	e of				7)		
A) a compound. C) a homogeneous mixture.			B) a heterogeneous mixture.				
			D) an element.				
8) Predict the charge	that an ion forme	d from Se would	have.		8)		
A) 1-	В) 3-	C) 6+	D) 2-	E) 4+			
9) Which of the follow	ving exists as a di	atomic molecule?			9)		
A) krypton							
B) lithium							
C) phosphorus	•						
D) carbon							
E) hydrogen							
10) How many signific	cant figures are in	0.00523980mL?			10)		
A) 5	B) 7	C) 6	D) 4	E) 3			
11) A covalent bond is	best described as	;			11)		
A) the transfer of							
•	f electrons betwe	en atoms.					
C) a bond betwe	een two polyatom	nic ions.					
	een a metal and a						
E) a bond betwe	een a metal and a	polyatomic ion.					
12) In a chemical react	ion, matter is neit	her created or de	stroyed. Which law does	s this refer to?	12)		
A) Law of Defin			•				
	ern Atomic Theor	y					
C) First Law of	Thermodynamics	· }					
D) Law of the C	onservation of M	ass					
E) Law of Multi	iple Proportions						

<u>Part II Short Answer</u>: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work. (48 pts)

1.		Circle the following which is an element. (not a Compound) (8	pts total, 2 pts each)
		CO_2 Fe $Sr Br_2$ O_2	
2.		Fill in the blanks. (6 pts total, 3 pts each)	
	a.	amL = 1 liter b. 1 meter	r = cm
3		For the following symbols give the element name. For the follow element symbol. (6 pts total, 3 pts each)	ing element name, write down the
Zn	ı <u></u>	oxygen	
4.		Given the following block directly from the periodic table, (8 pts	35
Br			Br 79.904
	a.	a. Write the symbol for the element in the form of ${}^A_z \chi$	
	b.	b. How many protons? c. How many electrons (for a new	itral atom) ?
	d.	d. What is the charge on the element as an ion? explain o	r show work.
	e.	e. How many neutrons? (show work)	
	f.	f. How many atoms does one mole of the element contain	
	g.	g. How much does one atom of the element weigh amu	i .
	h.	h. How much does one mole of the element weigh gran	ms
D	r Hs	Hahn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form A) page 3

- Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
 - (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



8 Given the following list of chemical formulas, circle all which are ionic (1 pt each, 6 pts total)

CaCl₂

 CO_2

 Sr_3N_2

PCl₃

BaF₂

 F_2

Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) B (+3) I (-1)

Part III. Long Answer Please show work for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

Conversion Problem: (show work) (10 pts) 1.

Convert 13.78 milliliters to cups (1 Liter = 1.0567 quarts, 4 cups = 1 quart)

- (16 pts total) 2. For the element S
 - What is the mass of one mole of the element? _____ grams (4 pts)
 - b. How many grams does 0.278 moles weigh? show work. (6 pts)

How many atoms do you have in that many moles? (show work). (6 pts)

Exam	I General Chemistr	y I Lecture Fall 2014	9/17/14 We	dnesday f	orm 10:30 B	Dr. Hahn	Exam #
Jame_			(print) Na	me			(sign)
/ <mark>lultip</mark> l vork, I	le choice questions ha obviously cannot g	l credit and full credit ave no partial credit. rade it. (2 pts print an me where the remaini	Please write and sign exam)	anything yo If you run	ou want grad out of space	ed legibly. If I , please continue	cannot read your
		CE. Choose the one a 2 pts per question, 24		best comp	letes the stat	ement or answe	rs the question.
	1) How many signif	icant figures are in 0.0	00523980mL?				1)
	A) 4	B) 6	C) 7		D) 5	E) 3	
	A) protons and B) neutrons in C) electrons in D) protons and	ect description of an at I neutrons in nucleus; nucleus; protons and nucleus; protons and I electrons in nucleus; nd electrons in nucleus;	electrons in or electrons in or neutrons in or neutrons in or	bitals bitals bitals			2)
	C) a bond bety D) the sharing		lyatomic ion. atoms.				3)
	4) Which of the followard (A) color B) density C) temperature D) mass E) odor	owing are examples o	f extensive pro	perties?			4)
	5) Predict the charg	e that an ion formed f B) 2–	rom Se would C) 4+	have.	D) 1-	E) 6+	5)
	6) In a chemical rea A) Law of Def B) Law of Mu C) Law of Mo	action, matter is neithe finite Proportions Itiple Proportions dern Atomic Theory Conservation of Mass	r created or de		·		6)
	E) First Law o	f Thermodynamics					_
	7) Which of the foll A) Ni	owing elements is a no B) K	onmetal? C) Br		D) Be	E) Ce	7)
	Dr. Hahn Genera	l Chemistry I Lecture	Exam I	Fall	2014	10:30 form B	page 1

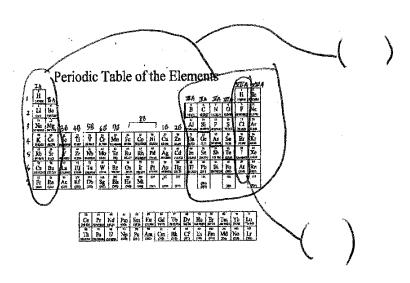
8) Identify an anion.		8)
A) An atom that has lost a neutron and a proton.		
B) An atom that has gained an electron.		
C) An atom that has lost an electron.		
D) An atom that has gained a neutron.		
9) H ₂ O is an example of		9)
A) a homogeneous mixture. B) a	compound.	
	heterogeneous mixture.	•
10) IAR : 1 (4 C.Hin a suiste as a distamic malagula?		10)
10) Which of the following exists as a diatomic molecule?		10)
A) phosphorus		
B) carbon		
C) lithium D) krypton		
E) hydrogen		
E) Hydrogen		
11) Identify a solid.		11)
	definite shape and definite volume	
	definite shape and no definite volume	
12) A student performs an experiment to determine the densit	y of a salt solution. She obtains the	12)
following results: 1.79 g/mL, 1.81 g/mL, 1.80 g/mL, 1.81 g/m		/
the salt solution is 1.80 g/mL, which statement below best d		
A) Her results are precise, but not accurate.		
B) Her results are neither precise nor accurate.		
C) Her results are both precise and accurate		
D) Her results are accurate, but not precise.		
E) It isn't possible to determine with the information give	en.	

<u>Part II Short Answer</u>: Write the word or phrase or circle the choice that best completes each statement or answers the question. Some questions may require that you show work. If you do not show work, you may lose points. Even on questions which do not require work, if you legibly show work, you may get some partial credit.

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work. (48 pts)

1.		Circle the following which is a Compound (not element) (8 pts total, 2 pts each)
		CO_2 Fe $Sr Br_2$ O_2
2.		Fill in the blanks. (6 pts total, 3 pts each)
	a.	1 kilogram = grams b. 1 km = meters
3.		For the following symbols give the element name. For the following element name, write down the element symbol. (6 pts total, 3 pts each)
Pt		carbon
В		Given the following block directly from the periodic table, (8 pts, 1 pt each) Be
	a.	Write the symbol for the element in the form of ${}^{\Lambda}_{z}$
	b.	How many protons? c. How many electrons (for a neutral atom)?
	d.	What is the charge on the element as an ion? explain or show work.
	e.	How many neutrons?(show work)
	f.	How many atoms does one mole of the element contain
	g.	How much does one atom of the element weigh amu
	h.	How much does one mole of the element weigh grams
Dr	. На	hn General Chemistry I Lecture Exam I Fall 2014 form (10:30MWF form B) page 3

- Match the following to the letters shown. The letters may only be used one time or not at all. (4 pts each, 8 pts total)
 - (a) transition metal elements (b) lanthanide, actinide elements (c) main group elements (d) alkali metal elements (e) alkaline earth elements (f) halogens (g) noble gases



Given the following list of chemical formulas, circle all which are covalent (1 pt each, 6 pts total) 8

CaCl₂

 CO_2

 Sr_3N_2

PCl₃

BaF₂

 \mathbf{F}_2

Give the correct formula for the following elements. The ion charges are given together with the element symbol. (show work) (6 pts) K(+1) N(-3)

Part III. Long Answer Please show work for full credit and to receive partial credit. (26 pts) **** Please attempt every problem for partial credit. You will get no partial credit if you just rewrite the question with no change in anything.****

Please show all work on this exam itself. If you are going to show work on the scratch paper and want me to grade it, clearly indicate where I can find your work otherwise, I obviously cannot grade work I cannot find.

1. Conversion Problem: (show work) (10 pts)

Convert 13.78 kilograms to ounces (453.59 grams = 1 pound, 16 ounces = 1 pound)

- 2. For the element Se (16 pts total)
 - a. What is the mass of one mole of the element? _____ grams (4 pts)
 - b. How many grams does 0.0672 moles weigh? (show work.) (6 pts)

c. How many atoms do you have in that many moles? (show work). (6 pts)