Gen Chem I	(CHM 201) Fall	18 Dr. Hahn MV	VF 8 am Quiz V fo	rm A 10/24 W	Exam #	nice and hage
Name	Len	Ø.	Name			
Sign	, ,		Print			
Please show	work on all que	stions for full cree	lit & partial credi	t. (20 total pts)	green	
1 C:	. d . C. II	11 -1:1 -	eaction. BA	= ball		`
		1 7 14			Manger	/.
C +	$2 \text{ Cl}_2 \rightarrow \text{ C Cl}_4$	WIT - 1	not atter	sell'		
(a) Calculat	e the theoretical y	ield of CCl ₄ (FW	$CCl_4 = 154.01 \text{ g/n}$	nole) in grams i	f you start with 80	0.2
grams of C	. (carbon, FW C	= 12.01 g/mol) (sh	$CC1_4 = 154.01 \text{ g/m}$ ow work) (7 pts)	Cla	124	
80,29	x = c zpt	India	$\frac{1}{1} \times \frac{154}{1}$:019 1	028 441	o C
·c	12.019	Imol	Imal	CCO, =	0, 1,	み ~
	C	c 2 pt		1 1	03×1030	CC
			1 8		and g	
1.	十一岁生					
(b) Calculate	the theoretical yi	eld of CCl ₄ if yo	ou start with 80.2 g	grams of Cl ₂ (FV	$V Cl_2 = 71.00 \text{ g/r}$	nole)
(allow work)	mol	/ mal	Cly	. 0/	00000	W.
80.29	× Ch	X - CO4 x	154,019	2 06	.105	4
Uz	11.009	1 mol	I male a	4 (8	6 81001	CU
E.	Cls	\mathcal{L}_{2}	CCl4 LS4014 Imal C	Ç	350	-
3	A -37	allemont	-7		211	
v	12	Co-Geo. De				
(c) Which is	the limiting reage	nt [(C) or (Cl ₂)	(circle one) (3 pts)	(show work)		tlem
-			+ Wabo		\mathcal{D}	
-	e nercentage viel	d if you experime	ntally made 90.2 or	ams of the CCL	? (3 pts) (show w	vork)
	90,29 C	Cla	0 = 104	n the	Wadal Co	~ (
	8200	CC0 × ((10= 104	10 0	1 philip	/ \ 2 (
Extra Credi	<u>t</u> : (4 pts)	115	ed in con	cillate	Dove	
If you made	up a solution of N	a ₂ CO ₃ (FW Na ₂ C	$O_3 = 106.01 \text{ grams}$	(mol) in water	r by dissolving 38	80.2
grams to ma	ke up 250.5 mL		s the molarity of the			
liter solution	(show work)	mal CBA	-27	250	511 1	P
380,3	2 R M	a. Co.	7.586 met Nazcoz	250	10/m X -10/	14
1/0	OX TOO	.019	Na Co	02	5050	NO M
1042	1/2	CC				
	7	2003	14	32M/	1/a. CO)	
12	1/1 h	A MANA	1 ,	14111	V VI 7	

Name Sign	Key	Nam Print		
Please shov	v work on all questi	ions for full credit & partia	al credit. (20 total pts)	
1. Giv	en the following bala	anced chemical reaction.	NA= not att.	engt)
C ₃ H	$I_8 + 5 O_2 \rightarrow 3 CO_2 -$	+ 4 H ₂ O	(JA-3)	
		9509 SSN 13 2097	2 g / mole) in grams if you sta	art with 80.2 grams
01 C3H8 (.	rw C3H8 - 39.00 g	(/ mole) (show work) (7 pts	15 120	
80,2	2 × 2906	X 4 not be	- x - 18,02g	, 147,998
CzHB	CZHA	C3 HX	1 molto	3 sif, ()
Ch.	2p	f) (3pt)	(100)	148 g H
(b) calculate	e the theoretical yield	d of H ₂ O if you start with 8	$80.2 \text{ grams of } O_2 \text{ (FW } O_2 = 3)$	2.00 g/mole). (show
work) (7 pts	5) Q2	4 200	18,029	7
80.2gl	12 × I mak	X-WX	ho,	6,1040
(Ipt)	32,00	5 Hol	1 April 100 100	(IRT)
15	1 7 1		###	1
	the limiting reagent	$t - [(C_3H_8) \text{ or } (O_2)]$ (circle	one) (3 nts) av adea	Consiste
(c) Which is	O O I I Cascar	Silte IA - 53	act H ₂ O, what is the percent y	ield? (3 pts) (show
Clic	ou made experimenta	any 23.2 grains of the produ		
(d) If you work)	7011			
(d) If you work)	7011		l v	NaOH
(d) If you work)	25.2g 36.1g	100 = 69.80	l. M = _	NaOH 72,28 mal = 5
(d) If you work) Extra Cred	25,2g 36,1g *	100 = 69,80	1.1(2-	(1) 1)
(d) If you work) Extra Cred If you made kilograms to liter solution	25,2g 36,1g Wit: (4 pts) Sup a solution of Nate on make up 1.37 Liter on) (show work)	100 = 69.80 a OH (FW NaOH = 40.01 gr rs of solution, what is the material of the solution o	rams / mol) in water by disso olarity of the solution? (Mo	larity = moles solute
(d) If you work) Extra Cred If you made kilograms to liter solution	25,2g 36,1g Wit: (4 pts) Sup a solution of Nate on make up 1.37 Liter on) (show work)	100 = 69.80 a OH (FW NaOH = 40.01 gr rs of solution, what is the material of the solution o	rams / mol) in water by disso	lving 2.892 larity = moles solute

Gen Chem I (CHM 201) Fall 18 Dr. Hahn MWF 8 a	m Quiz V form A 10/24 W Exam#				
Name	Name				
Sign	Print				
Please show work on all questions for full credit & partial credit. (20 total pts)					
1. Given the following balanced chemical reaction	on:				
$C + 2 Cl_2 \rightarrow C Cl_4$					
(a) Calculate the theoretical yield of CCl_4 (FW $CCl_4 = 154.01$ g/mole) in grams if you start with 80.2 grams of C. (carbon, FW C = 12.01 g/mol) (show work) (7 pts)					
(b) Calculate the theoretical yield of CCl ₄ if you star (show work). (7 pts)	t with 80.2 grams of Cl_2 (FW $Cl_2 = 71.00$ g / mole)				
(c) Which is the limiting reagent [(C) or (Cl_2)] (circ	le one) (3 pts) (show work)				
(d) what is the percentage yield if you experimentally	made 90.2 grams of the CCl ₄ ? (3 pts) (show work)				
Extra Credit: (4 pts)					
If you made up a solution of Na ₂ CO ₃ (FW Na ₂ CO ₃ =	106.01 grams / mol) in water by dissolving 380.2				

grams to make up 250.5 mL of solution, what is the molarity of the solution? (Molarity = moles solute /

liter solution) (show work)

Gen Chem I (CHM 201) Fall 18 Dr. Hahn	MWF 8 am Quiz V form B 10/24 W Exam #
Name	
Sign	Print
Please show work on all questions for full	credit & partial credit. (20 total pts)
1. Given the following balanced chemic	cal reaction:
$C_3H_8 + 5 O_2 \rightarrow 3 CO_2 + 4 H_2 O$	
(a) calculate the theoretical yield of H_2O (F of C_3H_8 (FW $C_3H_8=39.06$ g/mole) (sho	$^{\circ}$ W H ₂ O = 18.02 g / mole) in grams if you start with 80.2 grams by work) (7 pts)
	- 9
(b) calculate the theoretical yield of H ₂ O if y work) (7 pts)	you start with 80.2 grams of O_2 (FW $O_2 = 32.00$ g/mole). (show
(c) Which is the limiting reagent [(C ₃ H ₈) o	or (O ₂)] (circle one) (3 pts)
(d) If you made experimentally 25.2 granwork)	ms of the product H ₂ O, what is the percent yield ? (3 pts) (show

If you made up a solution of Na OH (FW NaOH = 40.01 grams / mol) in water by dissolving 2.892

kilograms to make up 1.37 Liters of solution, what is the molarity of the solution? (Molarity = moles solute

Extra Credit: (4 pts)

/ liter solution) (show work)