

NAME: \_\_\_\_\_

Lab Section: \_\_1(TuTh@3:30pm) \_\_3(TuTh@9:35am)

CHM 102

20 points, 30 mins.

Winter 2009

week 2

**Basic Competency Quiz #1 TOPICS**

*Chemistry, 7<sup>th</sup> ed., Zumdahl & Zumdahl, sections 8.1-8.4, 8.9-8.11, 8.13 & portions of 10.1-10.7*

Wallace

*revised 1/12/2009*

*Unless otherwise specified, each question is worth 5 points.*

1. Predict relative polarity of bonds.
2. Identify substances that consist of polar molecules.
3. Identify the most important (strongest) types of interparticle forces present in the solids of given substances.  
*C = covalent bonds; DD = dipole-dipole; H = hydrogen bonding; I = ionic bonds;  
LD = London Dispersion;*
4. Predict relative strength of interparticle forces from a given set of substances (when these substances are solids or liquids).

**Basic Competency Quiz #1 TOPICS**  
*Chemistry, 7<sup>th</sup> ed., Zumdahl & Zumdahl, ch. 10*

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revised 1/12/2009

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**Abbreviated Periodic Table of the Elements**

1 1A 1 H 1.01	2 2A 3 Li 6.94	4 Be 9.01											13 3A 13 Al 26.98	14 4A 14 Si 28.09	15 5A 15 P 30.97	16 6A 16 S 32.07	17 7A 17 Cl 35.45	18 8A 2 He 4.00			
11 Na 22.99	12 Mg 24.31	3 3B 21 Sc 44.96	4 4B 22 Ti 47.88	5 5B 23 V 50.94	6 6B 24 Cr 52.00	7 7B 25 Mn 54.94	8 8B 26 Fe 55.85	9 8B 27 Co 58.93	10 8B 28 Ni 58.69	11 1B 29 Cu 63.55	12 2B 30 Zn 65.38	31 3A 31 Ga 69.72	32 4A 32 Ge 72.59	33 5A 33 As 74.92	34 6A 34 Se 78.96	35 7A 35 Br 79.90	36 8A 36 Kr 83.80				
19 K 39.10	20 Ca 40.08	37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.94	43 Tc (98)	44 Ru 101.1	45 Rh 102.9	46 Pd 106.4	47 Ag 107.9	48 Cd 112.4	49 In 114.8	50 Sn 118.7	51 Sb 121.8	52 Te 127.6	53 I 126.9	54 Xe 131.3		
55 Cs 132.9	56 Ba 137.3	57 La 138.9	58 Ce 140.1	59 Pr 140.9	60 Nd 144.2	61	62	63	64	65	66	67	68	69	70	81 Tl 204.4	82 Pb 207.2	83 Bi 209.0	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra 226	103 Lr (262)	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Uun	111 Uuu	112 Uub	113	114	115							

Periodic Table of the Elements with Electronegativity values

H 2.1																		He
Li 1.0	Be 1.5											B 2.0	C 2.5	N 3.0	O 3.5	F 4.0		Ne
Na 0.9	Mg 1.2											Al 1.5	Si 1.8	P 2.1	S 2.5	Cl 3.0		Ar
K 0.8	Ca 1.0	Sc 1.3	Ti 1.5	V 1.6	Cr 1.6	Mn 1.5	Fe 1.8	Co 1.9	Ni 1.9	Cu 1.9	Zn 1.6	Ga 1.6	Ge 1.8	As 2.0	Se 2.4	Br 2.8		Kr 3.0
Rb 0.8	Sr 1.0	Y 1.2	Zr 1.4	Nb 1.6	Mo 1.8	Tc 1.9	Ru 2.2	Rh 2.2	Pd 2.2	Ag 1.9	Cd 1.7	In 1.7	Sn 1.8	Sb 1.9	Te 2.1	I 2.5		Xe 2.6
Cs 0.7	Ba 0.9	La 1.1	Hf 1.3	Ta 1.5	W 1.7	Re 1.9	Os 2.2	Ir 2.2	Pt 2.2	Au 2.4	Hg 1.9	Tl 1.8	Pb 1.9	Bi 1.9	Po 2.0	At 2.2		Rn 2.4
Fr 0.7	Ra 0.9	Ac 1.1	Rf	Ha	Sg	Ns	Hs	Mt										