

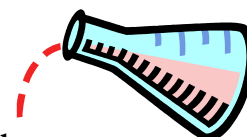
Exam 1A

Chem 1121

Fall 2018

Name: _____

Show all work to receive credit.



Multiple Choice. [4 pts. each.] Select the *best* answer on the scantron sheet.

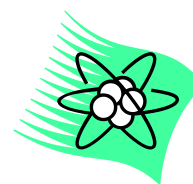
- Q1. The horizontal rows on the periodic table are called:
a) core b) groups c) periods d) isotopes
e) valence
- Q2. Which of the following is a *chemical property*?
a) flammability b) mass c) temperature d) concentration
e) pressure
- Q3. What is the name given to the change of state: solid \longrightarrow gas?
a) deposition b) condensation c) sublimation d) fusion
e) vaporization
- Q4. The element symbol for silver is:
a) Si b) Au c) S d) Na
e) Ag
- Q5. Which element has the symbol, Ca?
a) calcium b) carbon c) chlorine d) cobalt
e) lead
- Q6. How many atoms are contained in a molecule with the formula: $C_3H_6NO_2$?
a) 4 b) 11 c) 12 d) 13
e) 36
- Q7. Which of the following is NOT a property of metals?
a) shiny b) brittle c) ductile d) good conductors
e) malleable
- Q8. The SI prefix meaning $\times 10^3$ is:
a) M b) G c) d d) m
e) k
- Q9. The SI prefix meaning $\times 10^9$ is:
a) M b) G c) d d) m
e) k
- Q10. 250. mL is equal to how many liters?
a) 2.50 L b) 0.250 L c) 0.0250 L d) 2.50×10^{-3} L
e) 2.50×10^{-6} L

- Q11. How many significant figures are in the following measurement: 0.0100 kg?
 a) 1 b) 2 c) 3 d) 4
 e) 5
- Q12. How many significant figures are in the following measurement: 3.0×10^4 m?
 a) 1 b) 2 c) 3 d) 4
 e) 5
- Q13. 32052 mL rounded to 3 significant figures is:
 a) 320 mL b) 321 mL c) 32000 mL d) 3.20×10^4 mL
 e) 3.21×10^4 mL
- Q14. How many neutrons are in an atom of oxygen-17?
 a) 0 b) 8 c) 9 d) 17
 e) 18

Short Response. Show your work (where appropriate) to receive full credit!

Q15. [10 pt.] Fill in the blanks: (You must spell the name correctly for full credit.)

Element Name	Element Symbol
aluminum	
barium	
cobalt	
copper	
radon	
	P
	Sn
	Fe
	Ti
	Ni



Q16. [10 pt.] Element "X" consists of two isotopes: X-30 (with a mass of 30.00 u and a relative abundance of 15.0 %) and X-33 (with a mass of 33.00 u and a relative abundance of 85.0 %). Calculate its average atomic mass. **Show your work.**

Q17. [10 pt.] The speed limit in Canada is 100. km/h. How many feet per second is this? Be sure to use the conversion-factor method, and show all work! *Hint:* 1.000 km = 3281 ft.

Q18. [6 pt.] What are the names given to the following groups of the periodic table:

a) 2A _____

b) 7A _____

Q19. [8 pt.] Write out the electron configurations of the following atoms:

a) K _____

b) F _____

BONUS Question:

Give an example of a semi-metal or metalloid: _____

Useful Information

Periodic Table of the Elements

IA												IIIA		IVA	VA	VIA	VIIA	VIII
1 H 1.00794																	2 He 4.002602	
3 Li 6.941	4 Be 9.012182											5 B 10.811	6 C 12.0107	7 N 14.00674	8 O 15.9994	9 F 18.998403	10 Ne 20.1797	
11 Na 22.989770	12 Mg 24.3050											13 Al 26.981538	14 Si 28.0855	15 P 30.973762	16 S 32.066	17 Cl 35.4527	18 Ar 39.948	
19 K 39.0983	20 Ca 40.078	21 Sc 44.95591	22 Ti 47.867	23 V 50.9415	24 Cr 51.9961	25 Mn 54.938049	26 Fe 55.845	27 Co 58.9332	28 Ni 58.6934	29 Cu 63.546	30 Zn 65.39	31 Ga 69.723	32 Ge 72.61	33 As 74.92160	34 Se 78.96	35 Br 79.904	36 Kr 83.80	
37 Rb 85.4678	38 Sr 87.62	39 Y 88.90585	40 Zr 91.224	41 Nb 92.90638	42 Mo 95.94	43 Tc [98]	44 Ru 101.07	45 Rh 102.9055	46 Pd 106.42	47 Ag 107.8682	48 Cd 112.411	49 In 114.818	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90447	54 Xe 131.29	
55 Cs 132.90545	56 Ba* 137.327	57 Lu 174.967	58 Hf 178.49	59 Ta 180.9479	60 W 183.84	61 Re 186.207	62 Os 190.23	63 Ir 192.217	64 Pt 195.078	65 Au 196.96655	66 Hg 200.59	67 Tl 204.3833	68 Pb 207.2	69 Bi 208.98038	70 Po [210]	71 At [210]	72 Rn [222]	
87 Fr [223]	88 Ra** [226]	89 Lr [262]	90 Rf [261]	91 Db [262]	92 Sg [266]	93 Bh [264]	94 Hs [265]	95 Mt [268]										
		* 57 La 138.9055	58 Ce 140.116	59 Pr 140.90765	60 Nd 144.24	61 Pm [145]	62 Sm 150.36	63 Eu 151.964	64 Gd 157.25	65 Tb 158.92534	66 Dy 162.50	67 Ho 164.93032	68 Er 167.26	69 Tm 168.93421	70 Yb 173.04			
		** 89 Ac [227]	90 Th 232.0381	91 Pa 231.03588	92 U 238.0289	93 Np [237]	94 Pu [244]	95 Am [243]	96 Cm [247]	97 Bk [247]	98 Cf [251]	99 Es [252]	100 Fm [257]	101 Md [258]	102 No [259]			



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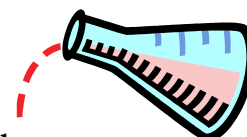
Exam 1B

Chem 1121

Fall 2018

Name: _____

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Multiple Choice. [4 pts. each.] Select the *best* answer on the scantron sheet.

- Q1. Which of the following is NOT a property of metals?
a) shiny b) brittle c) ductile d) good conductors
e) malleable
- Q2. The SI prefix meaning $\times 10^3$ is:
a) M b) G c) d d) m
e) k
- Q3. The SI prefix meaning $\times 10^9$ is:
a) M b) G c) d d) m
e) k
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a) 1A _____

b) 8A _____

Q17. [8 pt.] Write out the electron configurations of the following atoms:

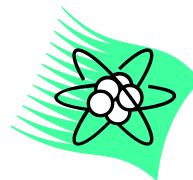
a) N _____

b) Ca _____

Q18. [10 pt.] Fill in the blanks: (You must spell the name correctly for full credit.)

Element Name	Element Symbol
	Ni
	Sn
	Fe
	Ti
	P
radon	
copper	
cobalt	
barium	
aluminum	

Q19. [10 pt.] Element “X” consists of two isotopes: X–33 (with a mass of 33.0 u and a relative abundance of 35.0 %) and X–37 (with a mass of 37.00 u and a relative abundance of 65.0 %). Calculate its average atomic mass. **Show your work.**



BONUS Question:

Give an example of a transition-metal: _____

Useful Information

Periodic Table of the Elements

IA												IIIA		IVA	VA	VIA	VIIA	VIII
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3 Li 6.941	4 Be 9.012182											5 B 10.811	6 C 12.0107	7 N 14.00674	8 O 15.9994	9 F 18.998403	10 Ne 20.1797	
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