

Unit 3 HW #1: Atomic Structure – Answers

Part I

1.

a) protons, neutrons	b) electrons
c) protons, neutrons	d) electron
e) electrons	f) atomic
g) mass	h) electrons
i) protons, neutrons	j) protons, electrons
k) +1	l) -1
m) cations, anions (omit)	n) mass; atomic

2.

a) $^{17}_8\text{O}$	b) $^{37}_{17}\text{Cl}$
c) $^{60}_{27}\text{Co}$	d) $^{57}_{26}\text{Fe}$
e) $^{131}_{53}\text{I}$	f) ^7_3Li
g) $^{55}_{25}\text{Mn}$	h) $^{25}_{12}\text{Mg}$
i) $^{41}_{20}\text{Ca}$	j) $^{56}_{26}\text{Fe}$
k) $^{238}_{92}\text{U}$	l) $^{244}_{94}\text{Pu}$

3.

Name	Symbol	Atomic Number	Mass Number	# of neutrons
Sodium	$^{23}_{11}\text{Na}$	11	23	12
Nitrogen	$^{15}_7\text{N}$	7	15	8
barium	$^{136}_{56}\text{Ba}$	136	56	80
Lithium	^9_3Li	3	9	6
Boron	$^{11}_5\text{B}$	5	11	6
Lead	$^{206}_{82}\text{Pb}$	82	206	124
Nitrogen	$^{14}_7\text{N}$	7	14	7
iron	$^{57}_{26}\text{Fe}$	26	57	31
krypton	$^{84}_{36}\text{Kr}$	36	84	48

Part II

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|------|------|-------|-------|-------|
| 1. J | 5. D | 9. D | 13. F | 17. G |
| 2. D | 6. K | 10. H | 14. B | 18. I |
| 3. C | 7. K | 11. K | 15. K | |
| 4. E | 8. J | 12. A | 16. J | |