

# Chapter 5 Study Guide - Answer Key

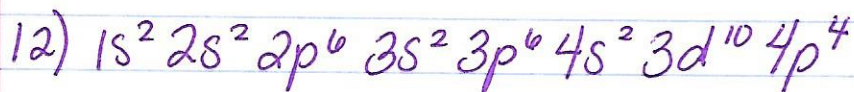
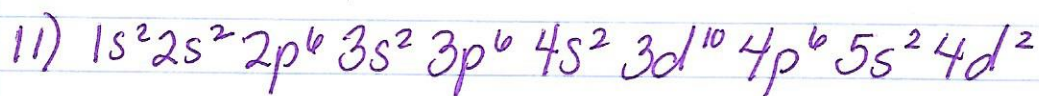
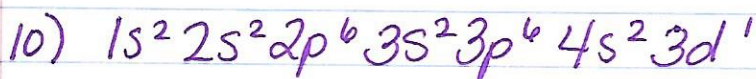
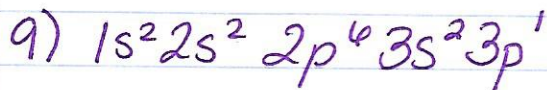
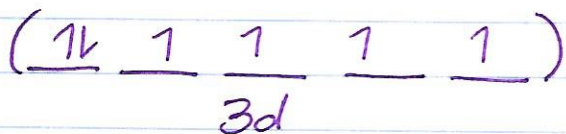
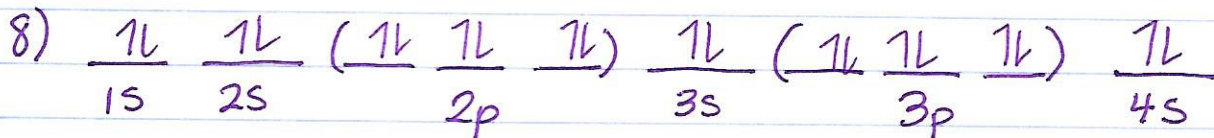
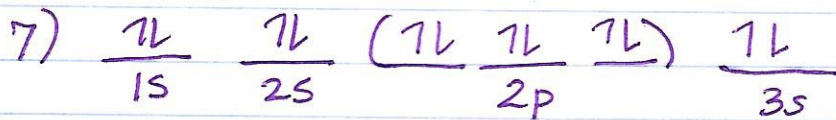
- 1) C
- 2) D
- 3) B
- 4) A

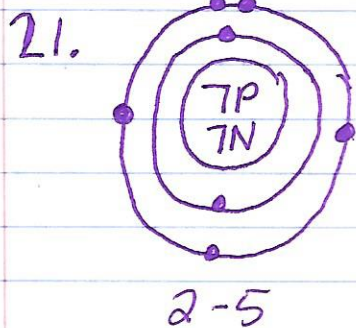
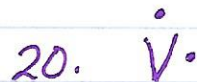
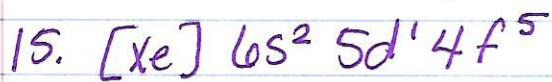
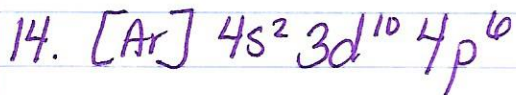
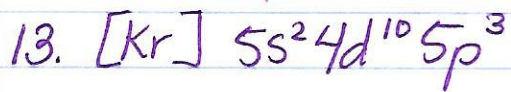
5)

Energy level	which sublevels
1	1s
2	2s 2p
3	3s 3p 3d
4	4s 4p 4d 4f

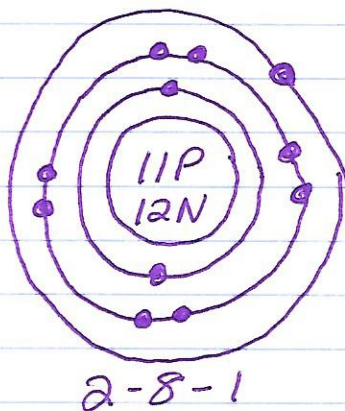
Sublevel	Shape	#orbitals	#e <sup>-</sup>
s	sphere ○	1	2
p	peanut ∞	3	6
d	double peanut ⊗	5	10
f	flower *	7	14

- 6) a) 6e<sup>-</sup>    b) 18 (2+6+10)    c) 10    d) 32 (2+6+10+14)





22.



23. The next orbital should be 2p not 3s

24. The d block is  $n-1$  so it should have 3d not 4d

25. You must start with a noble gas with less electrons than the element you are writing the noble gas notation for. If it is a noble gas, use the one before it.

26. The 2p orbital arrows should be drawn in the up direction first.