

Test Corrections:

3. The following is a possible set of quantum numbers that would describe an electron in this orbital (still referring to #1)

- A. 2, 0, 0, +1/2
- B. 0, 1, -1, -1/2
- C. 2, 1, -1, -1/2
- D. 1, 1, -1, -1/2
- E. Both C and D are possible

a. My initial answer was E. I wrote this because I thought (C) and (D) were correct. I didn't realize (D) was wrong. I forgot there was only a s and not a p orbital in level 1. *now you will remember!*

b. (C)

c. (C) is correct because the energy level can be 2 or more because the p orbital is in all energy levels greater than 1. This eliminates (B) and (D) and (E), because (B) says it is energy level 0, which there is none. (D) says it is in energy level 1 which only has the s orbital and (E) says (D) is right, which is wrong. (A) is wrong because it's second quantum number is 0 saying the electron is in the s orbital which is wrong because it is in the p orbital. Every number in (C) is correct, because it could be in the second energy level, it is in the p orbital, it could have a -1 spin and it could have a -1/2 charge.

great analysis!

$(l=1)$

↑ refers to the orientation of the orbital.

I have neither given nor received any unauthorized aid on this assignment.

+1.5

☆ +1.5 ☆

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 $\frac{93}{103} = 90.2\%$ *(A⁻)*