

Ch7/ PowerPoint Study-2 Quantum Numbers **Name:**

Answer these questions as you are watching the videos. They are due in class.

These questions are not just for you to answer but also to prepare you for the exam.

Make sure you understand what you are writing and not just copy from the text book.

- 1) What is the principal quantum number and what aspect of the atom does it represent?

- 2) How is angular momentum number calculated? What is the value of l , when $n = 4$?

- 3) How many different values of magnetic quantum numbers are possible when $l = 1$? What do these numbers mean? How many total electrons are possible when $l = 1$?

- 4) What does a $+1/2$ mean for an electron's magnetic spin number?

- 5) What alphabet of the angular quantum number associated with $l = 2$? (i.e. spdf?) _____

- 6) If $n = 3$, can $l = 2$? _____

- 7) If $n = 4$, can $m_l = +5$? _____

- 8) The quantum numbers for 3d are: $n=3$, $l=1$, $m_l=1$, $m_s=+1/2$? If not, write the correct numbers.