

SC111: General Chemistry

NAME _____

Quiz 4 **Circle your section***Dr. Joseph F. Lomax* Section 3512*Dr. JudithAnn Hartman* Section 4311

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1. In the Aurora Borealis oxygen atoms emit a greenish-yellow light at a wavelength of 557.7 nm (5.577×10^{-7} m).

a. What is the frequency of this light? (3 points)

b. What is the energy of this light in kJ/mol? (3 points)

2. Which of the quantum numbers describes: (3 points)

Orientation _____

Shape _____

Size _____

3. Identify which of the following sets of quantum numbers are correct. Put an X through any incorrect quantum number. (1 point each error)

	n	l	m_l	m_s
a.	4	3	! 2	+ 1/2
b.	2	3	! 2	! 1/2
c.	! 3	! 2	! 2	! 1/2
d.	4	2	+1	! 3/2
e.	5	1	+2	+ 1/2

4. Give the Lewis structures for the following compounds, show bonds and lone pairs. (3 points each)

a. NS_2G

b. PF_3