

**CHEM105 Unannounced Quiz 5***Name on back only please**Please show all formulas and all work to receive any credit*

1. Write the ***complete*** electron configuration for each of the following:

a. Ca

b. Ra

c. Cr

d. Ni<sup>2+</sup>

e. F<sup>-</sup>

2. Today is the 15<sup>th</sup> day of the month; in celebration of today, please complete the following table showing, ***in the order that they are filled*** (beginning with the lowest energy level), the quantum numbers for each of the 15 electrons in a phosphorus atom that is in the ground electronic state.

<b><i>Electron number</i></b>	<b><i>n</i></b>	<b><i>l</i></b>	<b><i>m<sub>l</sub></i></b>	<b><i>m<sub>s</sub></i></b>
<b><i>1</i></b>				
<b><i>2</i></b>				
<b><i>3</i></b>				
<b><i>4</i></b>				
<b><i>5</i></b>				
<b><i>6</i></b>				
<b><i>7</i></b>				
<b><i>8</i></b>				
<b><i>9</i></b>				
<b><i>10</i></b>				
<b><i>11</i></b>				
<b><i>12</i></b>				
<b><i>13</i></b>				
<b><i>14</i></b>				
<b><i>15</i></b>				