

ATOMIC MODEL & ELECTRON CONFIGURATION**Exit Ticket**

1. List two types of electromagnetic radiation with frequencies lower than infra red.
2. In the Bohr's model, what happens when an electron transitions between orbits?
3. According to the quantum-mechanical model of the hydrogen atom, which transition produces light with longer wavelength: 3p to 2s or 4p to 2s? Give an explanation.
4. Using only a periodic table, write the complete electron configuration for each atom or ion:
 - a) Ni
 - b) Se
 - c) P^{3-}
 - d) Al^{3+}

5. Give symbol and name the element in the fourth period with:

a) 5 valence electrons _____

b) a total of four 4p electrons _____

c) a total of three 3d electrons _____

d) a complete outer shell _____

6. Potassium is a highly reactive metal, while argon is an inert gas. Explain this difference based on their electron configurations.

7. Write orbital notations for the valence electrons and determine the number of unpaired electrons for each atom listed below:

a) As

b) Fe

c) Ba