

Unit 2: Ch 5.2-5.3 - Electron Configurations #1 – “Longhand Notation”

WHERE ARE ELECTRONS:

- Heisenberg Uncertainty Principle -

ELECTRON CONFIGURATIONS:

- **DEFINITION:**

- Electrons located in 3-D _____.

- Described by _____ that represents _____ states, _____, and _____ of electrons.

- PRINCIPAL QUANTUM NUMBER:

- **SYMBOL –**

- **1)**

- **2)**

- Starts at the _____ and most _____ energy level (_____ to the nucleus).

-

- _____ number of **electrons** in _____ **energy level** →

- n=1 →

- n=2 →

- n=3 →

- n=4 →

○ **ORBITAL QUANTUM NUMBER:**

▪ **SYMBOL –**

▪ 1)

▪ 2)

▪ EX:

▪ “ _____ ” (sublevel): _____

• _____ to _____ energy.

• n=1 →

• n=2 →

• n=3 →

• n=4 →

▪ **PUTTING IT TOGETHER:**

• Sublevels have _____ - Region occupied by _____ of _____.

○ “ s ” →

○ “ p ” →

○ “ d ” →

○ “ f ” →

• **WRITING ELECTRON CONFIGURATIONS: *TAIL-TO-TIP METHOD***

○ Written as:

Ex #1) Carbon (C) –

Ex #4) Nickel (Ni) –

Ex #2) Chlorine (Cl) –

Ex #5) Cadmium (Cd) –

Ex #3) Potassium (K) –

Ex #6) Lead (Pb) –