**Unit 1B Electronic Structure Review Worksheet**

1. **Calculate frequency and wavelength using the speed of light formula. Calculate energy using Planck’s equation.**

*Complete attached worksheet*

1. Describe Niels Bohr’s experiment, discovery and atomic model:
2. Describe the modern electron cloud quantum model:
3. Draw an s orbital:
4. Draw a p orbital:
5. Draw a d orbital:
6. Write the electron configuration for copper:
7. Write the noble gas (abbreviated) electron configuration for iodine:
8. 1s22s22p63s23p64s23d8 is the electron configuration for what element?
9. [He]2s22p3 is the noble gas (abbreviated) electron configuration for what element?
10. Place the following types of electromagnetic radiation in order of largest wavelength to smallest: red, infrared, orange, radio and tv, violet, x-rays, green, ultraviolet, yellow, gamma, blue, microwave, indigo.
11. Place the following types of electromagnetic radiation in order of largest frequency to smallest: red, infrared, orange, radio and tv, violet, x-rays, green, ultraviolet, yellow, gamma, blue, microwave, indigo.
12. The aufbau principle states:
13. Hund’s rule states:
14. The Pauli principle states:
15. Draw the orbital diagram for magnesium:
16. Is this orbital diagram valid?



1. If not, which principle/rule does it violate?
2. If so, which element does it represent?