Chapter 4 Test Review

1. State the range of the Human visual spectrum in nanometers?

2. What is the relationship between wavelength and Frequency?

3. What is the symbol for wavelength?

4. What are the units for Energy?

5. Convert 555 nm to frequency.

6. What is the lowest wavelength in the human visual spectrum and wat color would this be?

7. What is the relationship between wavelength and energy?

8. How many electrons can fit in an orbital?

9. How many electrons can fit into energy level 3?

10. Write the short hand notation electron configuration for Sulfur?

11. Will Sulfur need to add or lose electrons when it reacts? Explain why and state number of electrons.

12. Write the short hand orbital notation for Vanadium?

13. How many empty orbitals would there be in an atom Arsenic? Support your answer.

14. What are the units for frequency?

15. When you measure the height of an energy wave you are measuring its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?

16. Convert 3.12x1014 Hz to Energy.

17. Why would X rays be more dangerous to humans than radio waves. Explain using wavelength, frequency and Energy.

18. Write the complete electron configuration for Potassium.

19. Draw p orbitals with 4 electrons showing a correct and an incorrect example of Hund’s rule.

20. Draw an S orbital that shows an incorrect example of Pauli’s principle.

21. Write the complete electron configuration for Oxygen and then show an incorrect version of it that doesn’t follow Aufbau’s Rule.

22. Convert 850 nm to Energy.

23. How many orbitals are there in an f sublevel?

24. Which gets filled first the 3d sublevel or the 4s? Explain why?

25. What is the name of the outer electrons in an atom and why are they important?