

Signals From Within

Answer these questions in the Homework Section of your Lab Notebook

Video Questions:

1. Give a general definition of spectroscopy
2. List examples of electromagnetic radiation mentioned in the video
3. Describe the relationship between energy and frequency of electromagnetic radiation
4. Describe the role of melanin in the skin
5. Define “SPF” value. How can these values be interpreted?
6. List and describe examples of molecular motion mentioned in the video
7. Explain what must happen in order for electromagnetic radiation to be absorbed by matter
8. What are the 3 main components of any spectrophotometer
9. Discuss how IR spectra are used to help identify a compound
10. Explain the term “Signals from Within”

Textbook Questions

11. Diagram and describe the Thomson, Rutherford, Bohr, and Quantum Mechanical Models of the Atom (pp. 128—129)
12. Differentiate between energy level and orbital
13. Draw or trace the diagrams of *s*, *p*, and *d* orbitals (pp. 130—132)
14. Copy and label Figures 5.9 (p. 138)
15. Describe the relation between wavelength and energy
16. List the order of colors in the visible light spectrum
17. Define the term *photon*
18. What is the value of Planck’s constant (remember units)
19. What is the value for the speed of light in a vacuum?
20. Explain the Heisenberg Uncertainty Principle (p. 145)

YOU DO NOT NEED TO OUTLINE CHAPTER 5

