

CHAPTER REVIEW

Chapter **22**

Detecting Disease

I. Vocabulary Review

In the space provided, write the word that does not belong in each group of words.

- _____ 1. light microscope, refraction, visible light, magnetic field
- _____ 2. requires energy, electrophoresis, active transport, passive transport
- _____ 3. CT scan, sonogram, high energy, X rays
- _____ 4. AIDS, malaria, influenza, polio, epidemic
- _____ 5. Lyme disease, disease cluster, random distribution, nonrandom distribution
- _____ 6. electricity, magnetic resonance imaging, atomic nuclei, ionizing radiation
- _____ 7. diffusion, gate proteins, passive transport, energy not required
- _____ 8. isolate pathogen, grow pathogen in pure culture, reinfect original host, Koch's Postulates

II. Concept Review

Answer the following questions in the spaces provided.

- 9. Which technology would you recommend to diagnose a suspected tumor in a woman who is pregnant? _____
- 10. Cystic fibrosis is a disease in which excess _____, a situation perhaps involving defective _____.
- 11. In an ultrasound examination, high-frequency sound waves reflect off body parts to show _____.
- 12. X rays are _____ by high-density materials.
- 13. The difference between diffusion and passive transport is that passive transport _____.

Chapter Review 22 (continued)

14. Number the following steps to show the correct sequence of Koch's postulates.

- _____ Isolate a colony of bacteria from a sterile agar plate.
- _____ Show that a particular pathogen is always present in the original host.
- _____ Show that the pathogen from the new host is the same as in the original host.
- _____ Infect a new host with the pure culture.
- _____ Isolate the suspected pathogen from the original host.
- _____ Isolate and culture the pathogen from the new host.
- _____ Grow the suspected pathogen from the original host in pure culture in the laboratory.

III. Skills/Process Review

Using Figure 1, answer the following questions in phrases or complete sentences.

15. Explain how the arrangement of iron filings around the poles of a horseshoe magnet can be used as a model to illustrate disease clusters.

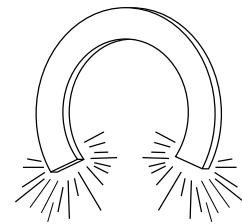


Figure 1

16. If Figure 1 were used as a model to explain the mechanism for MRI, what would the iron filings represent? _____

17. How is the model different from the way MRI works? _____

IV. Feature Review

18. **Science and Society: The Cost of MRI** Has the increased use of expensive technology meant better health in the United States? Why do doctors often prescribe MRI for common sports injuries? _____
