

CHAPTER REVIEW**Chapter 3****Sound and Hearing****I. Vocabulary Review**

In the blank, write the word or words that best complete the sentence.

1. The bunched-up area of a coiled spring represents the _____ area.
2. The stretched-out area of a coiled spring represents the _____ area.
3. Sound cannot travel through the vacuum of space because there is no _____ to carry the vibration.
4. The number of vibrations that occur per second is _____.
5. The measurement unit used to describe frequency is the _____.
6. Bats can hear and produce sound of a higher _____ than humans.
7. A picture of sound vibrations from noise or music can be seen on a(n) _____.
8. A violin sounds different from a cello even when both instruments play the same pitch because of a difference in sound _____.
9. A glass window will sometimes vibrate when certain sounds hit it because of _____.
10. The highness or lowness of sound frequency is the _____.

II. Concept Review

In the blank at the left, write the letter of the choice that best completes the statement or answers the question.

- _____ 11. When you wear earplugs, you can't hear because the vibrations cannot reach the _____.
a. air **b.** eardrums **c.** ear canal **d.** medium
- _____ 12. The eardrum vibrates due to _____ in the air of the ear canal.
a. compressions and rarefactions **c.** rarefactions only
b. compressions only **d.** the type of medium
- _____ 13. Sound travels in steel faster than in water because the particles of matter in steel _____.
a. vibrate faster **c.** are closer together
b. are further apart **d.** vibrate more slowly
- _____ 14. For the vocal cords to produce a _____ pitch, they must get tighter and closer together.
a. high **b.** loud **c.** low **d.** soft
- _____ 15. A piano tuner will tighten the strings of a piano so that the pitch will be _____.
a. louder **b.** softer **c.** lower **d.** higher

Chapter Review 3 (continued)

- _____ **16.** Bats and dolphins both hear a _____ than humans do.
a. smaller range of pitches
b. smaller range of frequencies
c. larger range of resonances
d. larger range of pitches and frequencies
- _____ **17.** An audiogram of music will be _____ than the audiogram of noise.
a. always more organized
b. always less organized
c. generally more organized
d. generally less organized
- _____ **18.** Which of the following does NOT affect the sound quality of a musical instrument?
a. how sound is made in the instrument
b. the material of the instrument
c. the size and shape of the instrument
d. the color of the instrument
- _____ **19.** A musical note sung at the right pitch and loud enough can cause a glass to break because of _____.
a. frequency **b.** rarefaction **c.** resonance **d.** pitch

III. Skills/Process Review

In the blank at the left, write the letter from Figure 1 that answers the question.

- _____ **20.** In group 1 of Figure 1, which bottle produces the lower frequency when you blow across the top?
- _____ **21.** In group 2 of Figure 1, which tuning fork produces the higher frequency when struck?
- _____ **22.** In group 3 of Figure 1, which bottle produces the higher frequency when you blow across the top?
- _____ **23.** In group 4 of Figure 1, which tuning fork produces the lower frequency when struck?
- _____ **24.** In group 5 of Figure 1, which object produces the higher frequency?

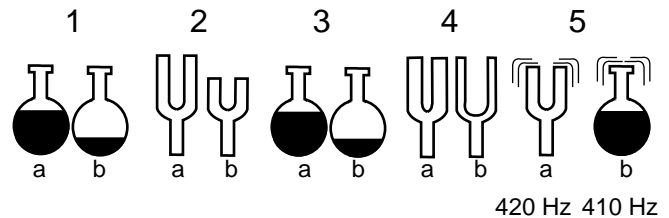


FIGURE 1

IV. EYV Review

- 25. Technology Connection: Active Noise Control** Give some reasons for and against using active noise control devices. _____
