

CHAPTER REVIEWChapter **3****Electromagnetic Waves****I. Vocabulary Review**

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

1. When the crest of one wave aligns with the trough of another, _____ interference occurs.
2. The bending of waves around a barrier is called _____.
3. All electromagnetic waves travel at the speed of _____.
4. Electromagnetic waves transfer energy by _____.
5. Measured in hertz, the number of waves per second is a wave's _____.
6. Electromagnetic waves are a combination of electric and magnetic _____.
7. Electromagnetic waves, like those on a jump rope, are _____ waves.
8. The entire range of electromagnetic waves is called the _____.
9. The longest electromagnetic waves are _____.
10. Infrared radiation is felt by the body as _____.

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. Which has the highest frequency?
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| a. radiowaves | c. light waves |
| b. gamma rays | d. X rays |
- _____ 12. On a sunny day, why would a black shirt feel hotter than a white one?
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|------------------------------------|---------------------------------------|
| a. It absorbs infrared radiation. | c. It absorbs X-ray radiation. |
| b. It reflects infrared radiation. | d. It reflects ultraviolet radiation. |
- _____ 13. Which of the following is NOT true for light?
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| a. It travels in a straight-line path. |
| b. It carries energy. |
| c. It is composed of waves with various frequencies. |
| d. It cannot travel through a vacuum. |
- _____ 14. Red light spreads more than blue light when passed through a thin slit because _____.
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| a. red has a shorter wavelength than blue |
| b. red has a longer wavelength than blue |
| c. red has a greater frequency than blue |
| d. red travels at a faster speed than blue |

