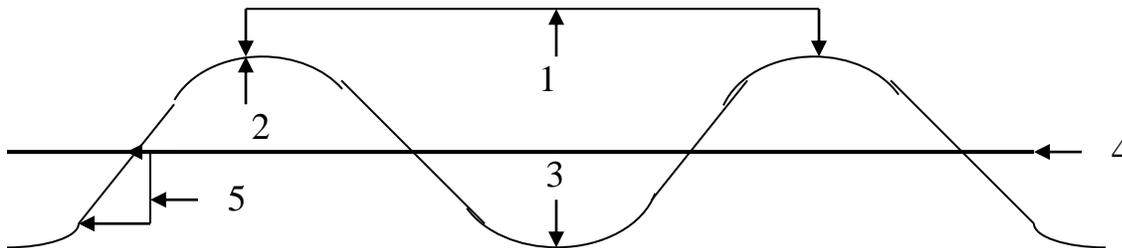


Names \_\_\_\_\_ Team \_\_\_\_\_

A. Use the following diagram to answer Questions 1-8



1-5. Identify the parts to this wave. (1 pt each)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

6. What type of wave is this? (3 pts)

7. What is the other most common type of wave? (3 pts)

8. Explain the difference between these two types of waves. (10 pts)

9. If a wave's wavelength is 2.4 cm and its period is 1.8 sec, find its frequency. Amount of work will be used as the second tiebreaker. (5 pts)

B. Completion (2 pts each)

Complete the sentences with the correct response.

10. If two waves are moving in opposite directions, a(n) \_\_\_\_\_ wave occurs.
11. The medium with the highest refractive index is \_\_\_\_\_.
12. If two waves are "in phase", they have \_\_\_\_\_ interference.
13. \_\_\_\_\_ is the bending of waves due to obstacles in the wave's path.
14. In the Doppler effect, the sound intensity is higher \_\_\_\_\_ the source.
15. The electromagnetic waves with the lowest wavelength are \_\_\_\_\_.

C. Short Answer

16. The primary colors of pigments are what? (3 pts)
17. How are these related to the primary colors of light? (5 pts)
18. List these electromagnetic waves in ascending order of frequency: ultraviolet, radio, visible, gamma, X-rays, infrared. (3 pts)
18. Name the four types of seismic waves. (4 pts)

#### D. Drawing

19. A wave is traveling through water at an angle of 30 degrees to the normal. It then encounters air at a boundary. Draw the wave and label the normal, the incident ray, and the refracted ray. Work will be used as the second tiebreaker. (10 pts)



## E. Tiebreaker

20. Two seismic waves can travel through the earth. However, not all parts of the earth get these waves. There is one section that receives neither of these waves at all. Name the two seismic waves discussed and why they do not go into this section. The section's name should also be stated.