

Wave and Sound Vocab. and Short Answer

Optional Study Guide-NO WORD BANK Quiz on _____ Approx 50 pts

1. a transfer of energy from one point to another with no transfer of mass- wave
2. a wave in which the particles vibrate perpendicular to the direction of the motion of the wave- transverse
3. a wave in which the particles vibrate in a direction parallel to the direction of motion of the wave- longitudinal
4. the high point of a transverse wave- crest
5. the low point of a transverse wave- trough
6. the area of greater concentration in a longitudinal wave- compression
7. the area of lesser concentration in a longitudinal wave- rarefaction
8. the measurement of the height of a transverse wave- amplitude
9. the unit for frequency- Hz
10. the name of the letter for wavelength- lambda
11. the distance from one part of a wave until it repeats- wavelength
12. the time it takes for one wave to pass a given point- period
13. sounds that have a frequency of more than 20,000 Hz- ultrasonic
14. sound level is measured in these units- decibels
15. a condition that occurs when the frequency of an applied force matches the natural frequency of an object- resonance
16. radio waves travel at what speed? light (3×10^8 m/s)
17. the part of a standing wave where little or no vibrations occur- node
18. the part of a standing wave where the maximum vibrations occur- antinode
19. What 2 variables affect the speed of sound?- temp & medium
20. FM stands for- Frey modulation
21. AM stands for- amplitude modulation
22. the units FM radio stations are in- MHz
23. the units AM radio stations are in- KHz
24. the material through which a wave is traveling- medium
25. the approximate speed of sound in m/s- 330
26. humans can hear up to approximately this many Hertz- 20,000
27. the number of waves that pass a given point each second- freq
28. the frequency shift that is a result of motion between the source of waves and an observer doppler effect
29. the famous bridge that collapsed due to the speed and frequency of the wind one day in 1940- _____
30. term for any object that is traveling faster than the speed of sound- supersonic
31. as you increase the frequency of a sound, the pitch of the sound ↑
32. In the Doppler Effect equation, this is the variable for the speed of sound. v
33. In the Doppler Effect equation, this is the variable for the speed of the source of the sound. v_s
34. As the temperature increases, what happens to the speed of sound? ↑
35. A wave pattern that results when two identical waves travel in opposite directions and interfere- standing wave
36. the loud noise made when objects travel faster than sound- sonic boom
37. sounds from 20-20,000 Hz are known as this- audible
38. a place on a baseball bat that if you hit it a standing wave is created- sweet spot
39. the equation for the speed of sound at any temperature- $v = 330 + (.6^\circ C)$
40. sounds with frequencies that are less than 20 Hz- infrasonic
41. Who first broke the sound barrier? Chuck Yeager
42. What does Mach 2 mean? twice speed of sound
43. What is the approximate speed of sound in miles per hour? 740
44. the lowest frequency of vibration for a standing wave- fundamental freq
45. sounds travel faster in solids than in air because? molecules closer
46. a sound wave is what type of wave? longitudinal
47. the unit of wavelength is: m
48. What travels faster, light or sound? light
49. What other unit is the same as a Hertz? 1/sec
50. List 1 example of resonance: bridge, wineglass breaking, humming into BW
51. What unit is period measured in? sec