**Physics Unit 10: Wave Characteristics, including Sound Test Review**

**Test Setup:**

Multiple Choice: 30 ( 2 pt each ) Problems: 8 ( 5 pt each)

**Short Answers: None on this test**

**Multiple Choice:**

1. Know the characteristics of sound waves
2. What does the trough of the sine curve used to represent a sound wave refer to?
3. Define the following terms:
4. Rarefaction
5. Compression
6. Amplitude
7. Wavelength
8. Pitch
9. Plane waves
10. Doppler effect
11. Intensity
12. Decibel
13. Harmonics
14. Transverse wave
15. constructive interference
16. destructive interference
17. standing wave
18. What does pitch depend upon?
19. What medium does sound travel the fastest?
20. Know the parts of a wavelength
21. What type of waves does the Doppler Effect occur with?
22. What is intensity proportional to?
23. Know the decibel level for human hearing, pain, vacuum cleaner, whisper
24. What is the sensation of loudness in human hearing?
25. Under what conditions does resonance occur?
26. Know what happens when an air column vibrates in a pipe:
27. That is open at both ends
28. That is closed at one end
29. What is the wavelength of the fundamental frequency of a vibrating string of length L
30. Know the formula for wavelength
31. How can two mechanical waves occupy the same space at the same time?
32. How are audible beats formed?
33. What happens when two mechanical wave coincide, what do we know about the resultant wave formed?
34. What happens when waves arrive at a fixed boundary?
35. What affects the frequency of waves?

**Problems: 8**

Spring constant problems: 2

Wavelength problems: ( vibrations and wavelength) 2

Simple harmonic motion problems: 3

Standing wave problem:1

Example of standing wave problem:

Vibrations of a certain frequency produces a standing wave on a stretched string that is 4 m long. The standing wave has 9 nodes and 7 antinodes. What is the wavelength of the wave that produces this standing wave?