Sounds of Music Theory Examination

Name_____ _____

School _____

Team # _____

Answer all questions directly on this answer sheet. This will count for 30 points towards your total score.

1. The quality of a sound that causes instruments to sound different from each other is called _____(2)
2. The fundamental frequency of a note is its _____.(2)
3. A _____ refers to a unit of loudness (2)
4. A _____ of a wave is a component frequency of the signal that is an integer multiple of the fundamental frequency. (2)
5. Define Resonance. (2)

6. What is the wavelength (in centimeters) of a guitar string vibrating at 329.6 Hertz? (Show all work) (4)

7. Besides shortening a string on a violin, how would you increase the frequency of the sound of an individual string? (2)

8. What is the wavelength corresponding to the 5th harmonic of a 90 cm long closed organ pipe? (Show all work) (4)

9. What is the speed on a standing wave of an 85 cm guitar string with a fundamental frequency of 250 Hz? (Show all work) (4)

10. The point on a standing wave where the amplitude is at a minimum is called the

    _____. (2)

11. Any frequency higher than the fundamental frequency is called a (an)

    _____ (2)

12. If a string has harmonic frequencies of 1056 and 1320 Hz, what is the fundamental frequency? (2)