



Name: _____ Sec: _____ Date: _____

Q.1 Choose the best answer.

1. The hammer, anvil, and stirrup are three tiny bones found in the:

- (A) outer ear (B) middle ear
(C) inner ear (D) cochlea

2. The pitch of a sound is how:

- (A) pleasant it is (B) high or low it is
(C) loud it is (D) far away it is

4. The loudness of a sound is called its:

- (A) pitch (B) frequency
(C) amplitude (D) measurement

5. The instrument used to show the loudness or amplitude of a sound is called a:

- (A) endoscope (B) microscope
(C) telescope (D) oscilloscope

6. Sound waves travel faster in:

- (A) water (B) Air
(C) Space (D) Steel

Q.2 Look at the diagrams of the musical instruments given below.

(a) For each diagram name the part which is vibrating.

(i) The vibrating part of a guitar is: _____ .

(ii) The vibrating part of a drum is: _____ .



(b) Most people can hear sounds of pitch ranging from _____ to _____
Hertz.

Q.3a Match the column.

Column A	Column B	Column C
1. Frequency	A. A measure of the amount of energy in a sound wave.	
2. Amplitude	B. The distance from one crest to another or one trough to another of a wave.	
3. Wavelength	C. The number of vibrations in a second	

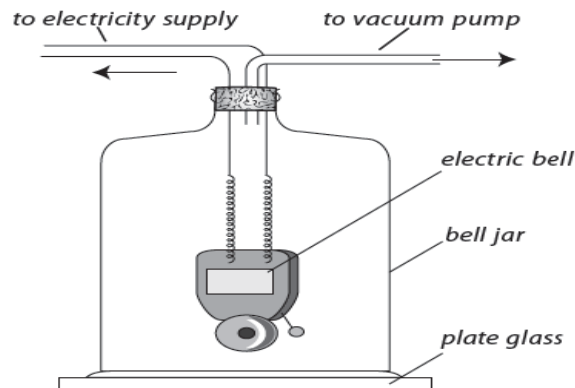
(b) Choose words from the list below to complete the following sentences.

Higher, Lower, Louder, Quieter

(i) A musical note with a high frequency sounds _____ than a musical note played at a low frequency.

(ii) A musical note with large amplitude sounds _____ than a musical note with small amplitude.

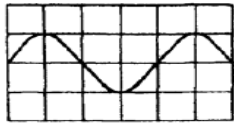
Q4. Nawaz has put an electric bell in an airtight glass jar. The bell and jar are shown in the picture below. At first, Nawaz could hear the bell ringing. But when his teacher pumped the air out of the jar, Nawaz could not hear the bell.



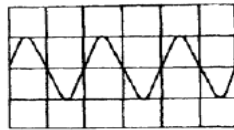
a) Why couldn't Nawaz hear the bell when the air had been pumped out of the jar?

b) Explain why sound travels faster through water than through air.

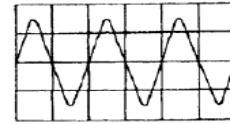
Q.5 The diagram below shows an oscilloscope with a sound wave produced by a musical instrument.



A



B



C

(a) Identify the diagram representing:

- I. the loudest sound: _____
- II. the lowest pitch: _____

(b) The diagram shows a guitar.



(i) Describe how the guitar produces sounds.

(ii) Describe how the guitar can be made to produce louder sounds.

(iii) State two ways that the guitar can be made to produce higher pitch sounds.

Q.6 A Company operates a quarry near local housing. People living near this quarry complained about the high noise levels. The company then built an earth barrier to reduce the noise levels that reached the houses. This is shown in the diagram below.

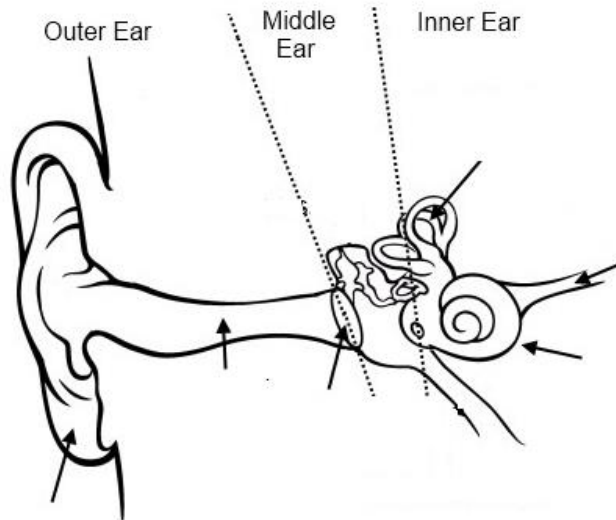


(i) State what is meant by noise.

(ii) Why is it important to reduce noise?

(iii) Explain how the barrier can reduce the noise levels.

Q.7a Label the parts of the ear.



b. Explain how a human ear works.
