

Name			
Class		Term	2
Year		Quiz Number:	Quiz 3
		Total Marks	/

End-of-unit test

Unit 6

- 1 Sound travels as sound waves.

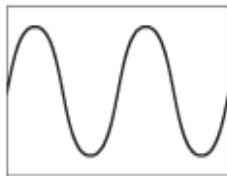
Complete these sentences using the best words.

[1]

As the loudness of a sound increases, the _____ of the sound wave increases.

As the pitch of a sound increases, the _____ of the sound wave increases.

- 2 The diagrams show the waveforms of four sounds, A–D, as displayed on an oscilloscope screen.



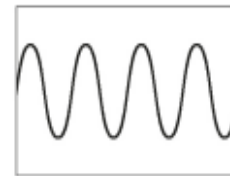
A



B



C



D

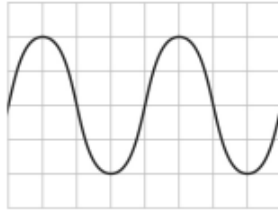
Complete the sentence using the correct letters.

[1]

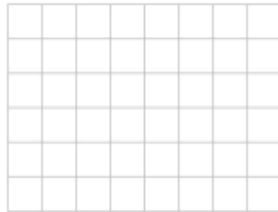
The quietest sound is _____ and the highest pitch sound is _____.

- 3 When two sound waves meet, they can reinforce each other or cancel each other.

a The diagram shows the waveform of one sound wave.



On the grid below, draw the waveform of a wave that will reinforce this sound. [1]



b A sound wave, P, can be heard clearly. Wave P has constant frequency and constant amplitude. Another sound wave, R, cancels P completely.

i Describe what is heard when P and R cancel. [1]

ii State how wave P must compare with wave R, if they cancel completely. [1]

Amplitude of P compared to R is _____

Frequency of P compared to R is _____

4 The list shows four theories, A–D, of how the Moon was formed.

A The Moon was formed as a separate object at the same time as the Earth.

B The Moon was a passing object that was captured into orbit around the Earth.

C The Moon was formed after a collision between Earth and another large object.

D The Moon split away from the Earth soon after the Earth was formed without a collision.

Which theory is currently accepted by most scientists? [1]

Write the letter: _____

5 Many different nebulae have been discovered.

a Describe what nebulae are. [1]

- b** A dark nebula is a type of nebula that does not emit light. A dark nebula looks dark because it blocks the light from stars that are behind it.

Suggest why dark nebulae are thought **not** to contain stellar nurseries.

[1]

- 6** The Earth's crust is made from many tectonic plates.

- a** The Nazca tectonic plate is moving towards the north-east at a speed of 4 to 5 cm per year.

State what causes this movement.

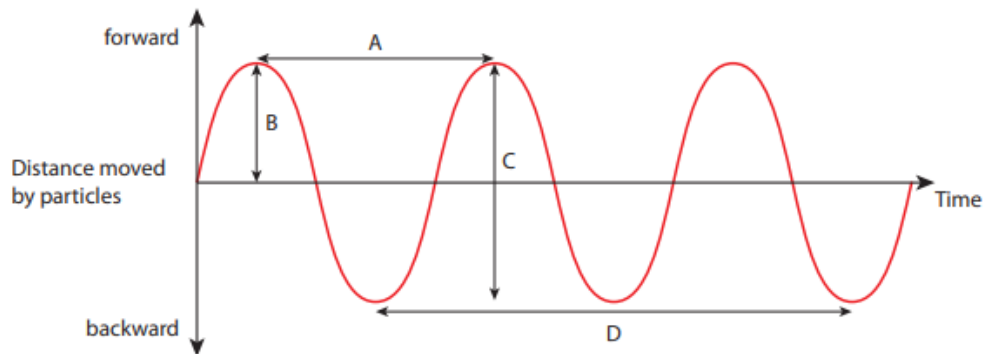
[1]

- b** The Nazca plate has a boundary with the South American plate. Earthquakes frequently occur close to this boundary.

Explain how these earthquakes are evidence for tectonic plates.

[1]

- 1** The graph shows how the particles in a sound wave move with time.



Which measurement shows the amplitude?

Give one letter.

[1]

- 2** Describe what happens to a sound when these changes are made. All other variables stay constant.

- a** The amplitude increases.

[1]

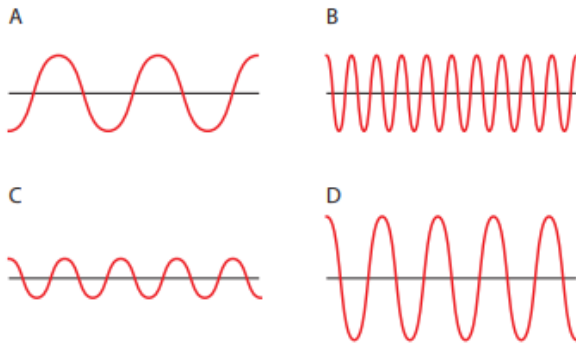
- b** The frequency increases.

[1]

- c** The number of waves per second increases.

[1]

3 The diagram shows how four different sounds appear on an oscilloscope.



Write the letter of the wave that represents

- a** the loudest sound with the highest pitch [1]
- b** the quietest sound with the lowest pitch. [1]

4 Draw diagrams to show how two sound waves of equal frequency and amplitude can

- a** meet each other to reinforce [3]
- b** meet each other to cancel. [3]

5 Many scientists think that the collision theory explains how the Moon was formed.

- a** Describe the events in the collision theory. [4]
- b** Describe two pieces of evidence that support the collision theory. [2]

6 a Explain what is meant by each of these terms.

- i** nebula [2]
- ii** stellar nursery [2]

Year 8

- b** When stars are first formed, they are more difficult to see than older stars that are the same distance from Earth. Suggest two reasons why the young stars are more difficult to see. [2]

- 7** Describe how each of these provides evidence for tectonic plates
- a** the shapes of the present-day continents [1]
 - b** the fossil record [1]