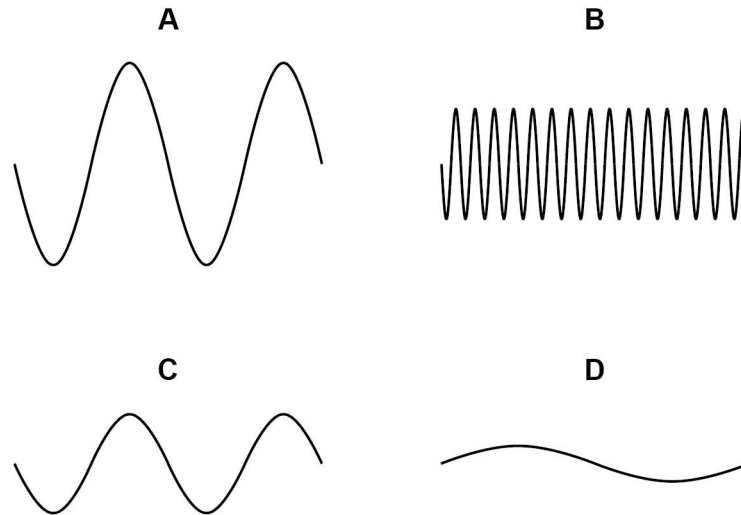


0 5

Figure 6 shows four waves.

The waves are drawn to the same scale.

Figure 6



0 5

1

Which wave has the greatest amplitude?

[1 mark]

Tick (✓) **one** box.

A B C D

0 5

2

Which wave has the greatest frequency?

[1 mark]

Tick (✓) **one** box.

A B C D

0 5

3

Which wave has the greatest wavelength?

[1 mark]

Tick (✓) **one** box.

A B C D

Turn over ►



0 5 . 4

A wave has a frequency of 1650 Hz and a wavelength of 0.200 m

Calculate the wave speed.

Use the equation:

$$\text{wave speed} = \text{frequency} \times \text{wavelength}$$

[2 marks]

Wave speed = _____ m/s

A student uses a mobile phone app that displays sound waves.

Figure 7 shows the student holding the mobile phone close to a loudspeaker.

Figure 7

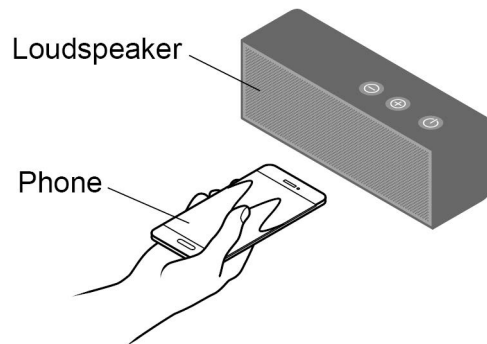
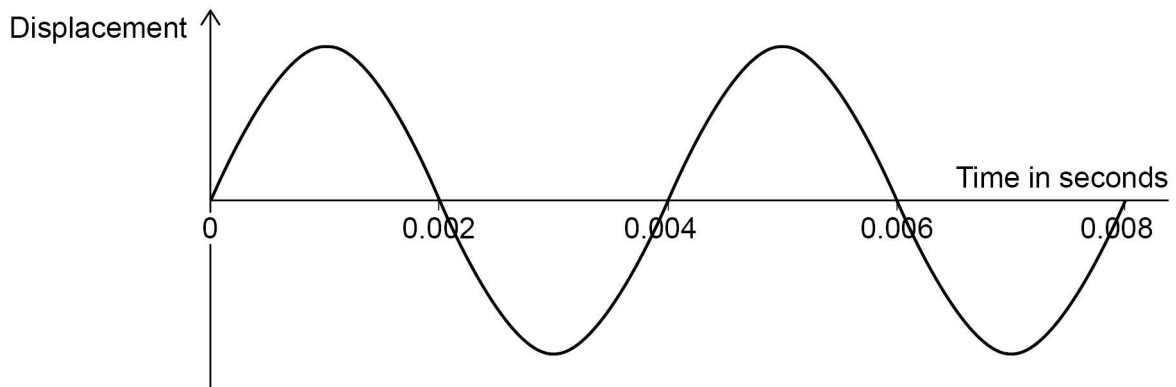


Figure 8 shows the wave pattern seen on the phone screen.

Figure 8



0 5 . 5 What is the period of the wave shown in **Figure 8**?

[1 mark]

Tick (✓) **one** box.

0.002 s 0.004 s 0.006 s 0.008 s

0 5 . 6 Determine the frequency of the wave shown in **Figure 8**.

Use the Physics Equations Sheet.

[3 marks]

Frequency = _____ Hz

9

Turn over ►



Question	Answers	Extra information	Mark	AO / Spec. Ref.
05.1	A		1	AO1 6.6.1.2
05.2	B		1	AO1 6.6.1.2
05.3	D		1	AO1 6.6.1.2
05.4	$v = 1650 \times 0.200$ $v = 330 \text{ (m/s)}$		1 1	AO2 6.6.1.2
05.5	0.004 s		1	AO2 6.6.1.2
05.6	$0.004 = \frac{1}{\text{frequency}}$ $\text{frequency} = \frac{1}{0.004}$ $F = 250 \text{ (Hz)}$	allow ecf from question 05.5	1 1 1	AO2 6.6.1.2
Total			9	