Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: Waves (Low Demand Questions)

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

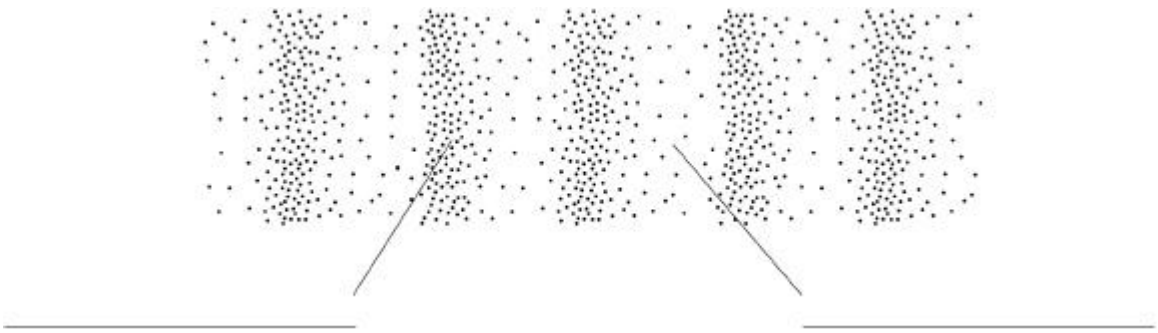
Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Q1.

Sound waves are longitudinal waves.

(a) **Figure 1** shows a sound wave.

Figure 1



Complete the labels on **Figure 1**.

Choose answers from the box.

compression	**extension**	**rarefaction**
reflection	**resistance**	

(2)

(b) Which of the following is true for longitudinal waves?

Tick (✓) **one** box.

Longitudinal waves transfer charge. ☐

Longitudinal waves transfer energy. ☐

Longitudinal waves transfer matter. ☐

(1)

Figure 2 shows a device a farmer uses to scare away birds.

Figure 2

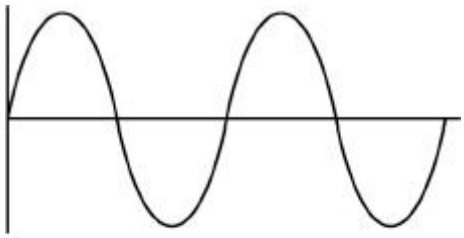
The device emits a very loud sound.

The farmer measures the sound emitted by the device at different distances from the device.

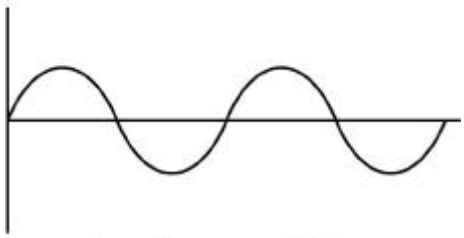
(c) **Figure 3** shows a visual display of the sound waves at different distances from the device.

Both waves are drawn to the same scale.

Figure 3



At a distance of 80 m



At a distance of 200 m

Which property of the wave changes between 80 m and 200 m?

Tick (✓) **one** box.

Amplitude ☐

Frequency ☐

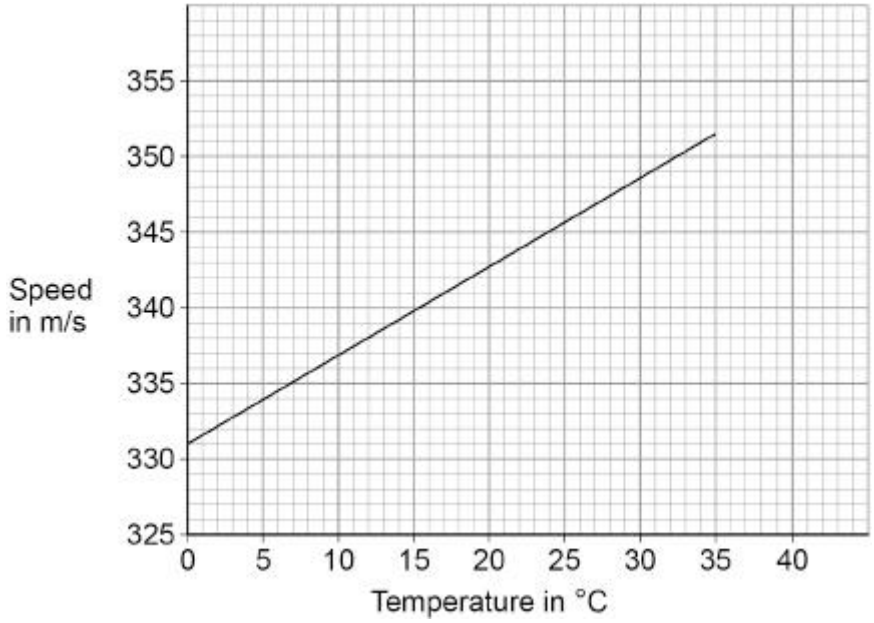
Period ☐

Wavelength ☐

(1)

Figure 4 shows how the speed of the sound emitted by the device is affected by the temperature of the air.

Figure 4



(d) The farmer tests the device on a day when the temperature of the air is 15 °C.

What is the speed of the sound emitted by the device when the temperature of the air is 15 °C?

Speed = _____ m/s

(1)

(e) The farmer stands a safe distance from the device.

It takes a time of 0.20 s for the sound to travel from the device to the farmer.

Calculate the distance between the device and the farmer.

Use your answer to part (d) and the equation:

distance = speed × time

_____

_____

_____

Distance = _____ m

(2)

(f) Explain how the time taken for the sound to reach the farmer is affected by the temperature of the air.

Use **Figure 4**.

_____

_____

_____

_____

(2)

(Total 9 marks)

Q2.

There are different types of electromagnetic waves.

(a) What do all electromagnetic waves transfer?

Tick (✓) **one** box.

Charge	☐
Energy	☐
Matter	☐
Sound	☐

(1)

(b) Complete the sentence.

Choose answers from the box.

charge	**frequency**	**speed**	**wavelength**

Different types of electromagnetic waves have a different _____

and a different _____.

(2)

(c) The diagram below shows the electromagnetic spectrum.

Radio waves	Microwaves	Infrared	**A**	Ultraviolet	X-rays	**B**

Give the names of parts **A** and **B** of the electromagnetic spectrum.

A _____

B _____

(2)

(d) Different types of electromagnetic waves have different uses.

Draw **one** line from each type of electromagnetic wave to its use.

Type of electromagnetic wave	**Use**
Microwaves	Electrical heaters
Ultraviolet	Energy efficient lamps
X-rays	Imaging bones
	Satellite communications

(3)

(Total 8 marks)