Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: GCSE Triple Science_Waves (SDQ)

Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

(a) Radio waves, microwaves and visible light are all electromagnetic waves that are used for communication.

(i) Name another electromagnetic wave that is used for communication.

_____

(1)

(ii) Name an electromagnetic wave which is **not** used for communication.

State a use for this electromagnetic wave.

Electromagnetic wave _____

Use _____

_____

(2)

(b) The table below shows the wavelengths for some electromagnetic waves, **A**, **B**, **C** and **D**.

Wave	Wavelength
A	1000 m
B	100 m
C	10 m
D	3 cm

A teacher is going to demonstrate diffraction of waves through a gap. She will carry out the demonstration in a classroom.

The teacher is able to generate waves **A**, **B**, **C** and **D**.

Which wave, **A**, **B**, **C** or **D**, would she use? ☐

Explain your answer.

_____

_____

_____

_____

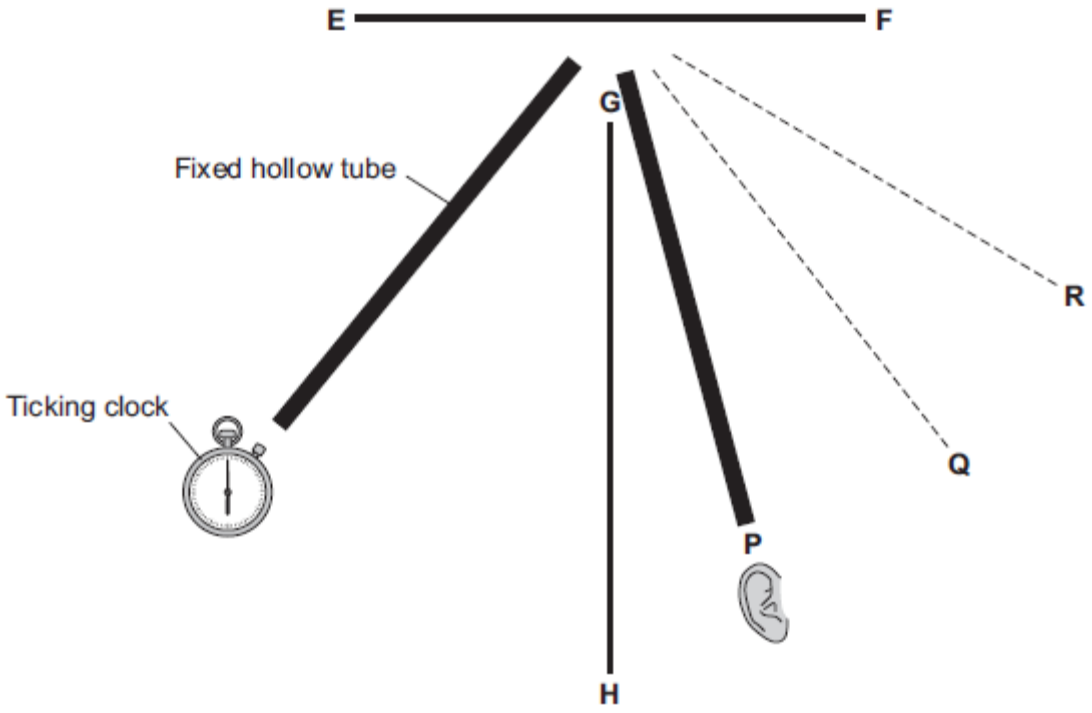
_____

_____

(3)

(c) In another demonstration, a teacher used a loud ticking clock as a source of sound, two hollow tubes and two smooth surfaces, **EF** and **GH**.

The figure below shows one of the hollow tubes fixed in position with a ticking clock at one end.



A student placed his ear at one end of the other hollow tube in position **P**. He moved this hollow tube, in turn, to positions **Q** and **R**.

(i) At which position, **P**, **Q** or **R**, did he hear the loudest sound? ☐

(1)

(ii) Explain your answer to part **(i)**.

_____

_____

_____

_____

_____

_____

(3)

(iii) Suggest why smooth surface **GH** in the figure above was needed.

_____

_____

(1)

(iv) The frequency of a sound wave is 15 Hz.

The speed of sound is 330 m / s.

Calculate the wavelength of the sound wave.

_____

_____

Wavelength = _____ m

(2)

(v) Give a reason why it would **not** be possible to do the demonstration in the figure above using sound waves with a frequency of 15 Hz.

_____

_____

(1)

(Total 14 marks)

Q2.

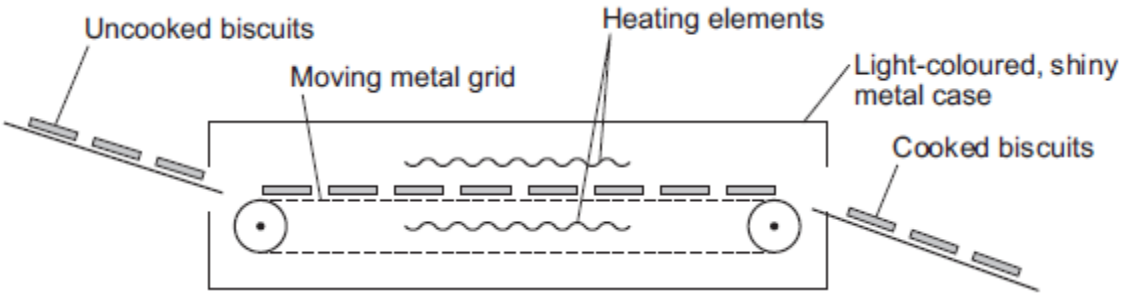
Figure 1 shows one way that biscuit manufacturers cook large quantities of biscuits.

The uncooked biscuits are placed on a moving metal grid.

The biscuits pass between two hot electrical heating elements inside an oven.

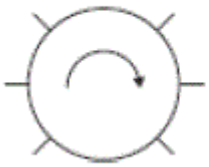
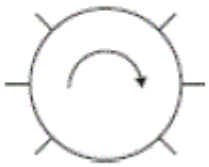
The biscuits turn brown as they cook.

Figure 1



The oven has two control knobs, as shown in **Figure 2**.

Figure 2

Power	Speed of moving metal grid
	

(a) Which type of electromagnetic radiation makes the biscuits turn brown?

_____

(1)

(b) Suggest **two** ways of cooking the biscuits in this oven, to make them turn browner.

1. _____

_____

2. _____

_____

(2)

(c) The inside and outside surfaces of the oven are light-coloured and shiny.

Explain why.

_____

_____

_____

_____

_____

_____

(3)

(Total 6 marks)