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

Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Mark Schemes

Q1.

(a) **Level 2:** The design would lead to the production of a valid outcome. All key steps are identified and logically sequenced.

3–4

Level 1: The design would not lead to a valid outcome. Some relevant steps are identified, but links are not made clear.

1–2

No relevant content

0

Indicative content

Wavelength

- place a metre rule at the side of the screen perpendicular to the wave fronts
- use the metre rule to measure the length of the screen
- take a photograph of the shadow on the screen
- count the number of complete waves on the screen
- determine the wavelength by dividing the length of the by the number of complete waves

or

- place a metre rule at the side of the screen perpendicular to the wave fronts
- take a photograph of the shadow on the screen
- use the metre rule to measure the distance between two wave front

Frequency

- count the number of waves that pass a given point
- time how long it takes for the waves to pass that point using a stop clock
- frequency is number of waves divided by time taken

or

- put a stop clock on the screen
- use a digital video camera to record the waves passing a point
- replay in slow motion and count the number of waves passing a point in 1 second

There must be a description of both frequency and wavelength measurement to access level 2

(b) 12.5 (Hz)

1

(c) to reduce the effect of random errors

1

(d) period = $\frac{1}{20}$

1

period = 0.05 (s)

allow 0.050 (s)

1

(e) v = 20 × 0.012

1

v = 0.24 (m/s)

1

[10]

Q2.

(a) A

1

(b) B

1

(c) D

1

(d) v = 1650 × 0.200

1

v = 330 (m/s)

1

(e) 0.004 s

1

(f)

0.004 = $\frac{1}{\text{frequency}}$

allow ecf from question ***(e)***

1

frequency = $\frac{1}{0.004}$

1

F = 250 (Hz)

1

[9]