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

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Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

(a) (i) radio(waves)

1

(ii) energy

correct answer only

1

(b) (i) 0.0125 (m)

*allow **1** mark for correct transformation and substitution*

2

(ii) make it hot(ter)

*do **not** accept cook it*
accept (air) particles inside ball will move faster
accept water in the ball gets hotter

1

[5]

Q2.

(a) conduction

*do **not** accept conductor*

1

(b) the freezer

both parts needed

greater temperature difference (between freezer and room)

*do **not** accept because it is the coldest*

1

(c) any **two** from:

- poor absorber of heat / radiation
  accept does not absorb heat poor emitter of heat / radiation is neutral
- reflects heat / radiation (from room away from fridge-freezer)
- reduces heat transfer into the fridge-freezer
- reduces power consumption of fridge-freezer
  *do **not** accept it is a bad conductor / good insulator*

2

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[4]

Q3.

(a) (i) same frequency / period / pitch / wavelength

ignore references to amplitude

1

(ii) differences in waveform / shape / quality

accept the diagrams are not identical

1

(b) (i) 20 000 Hz / hertz

or 20 kHz / kilohertz

*in both cases, if the **symbol** rather than the name is used, it must be correct in every detail*

1

(ii) material(s) / substance(s) (through which sound travels)

1

(iii) is absorbed

accept (some) sound (energy) is transformed / transferred <u>as</u> heat / thermal energy

1

is transmitted

accept is refracted
accept changes speed
accept changes velocity
*do **not** accept is diffracted*
*do **not** accept is diffused*
*do **not** accept is dissipated*

1

[6]

Q4.

(a) C or 0.18 mm

1

(b) 0.6 m

*allow **1** mark for correct transformation and substitution*
*allow **1** mark for changing frequency to Hz*
*answer 600 gains **1** mark*

2

(c) creates an alternating current

accept 'ac' for alternating current
accept alternating voltage

1

with the same frequency as the radio wave

accept signal for radio wave

or it gets hotter

1

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(d) X-rays cannot penetrate the atmosphere

accept atmosphere stops X-rays

*do **not** accept atmosphere in the way*

or X-rays are absorbed *(*by the atmosphere*)*

before reaching Earth

ignore explanations

1

[6]

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