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

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

There are different groups of waves in the electromagnetic spectrum.

(a) **Figure 1** shows the position of three groups of the waves.

Figure 1

A	**Microwaves**	**B**	**Visible light**	**C**	**D**	**Gamma rays**

Which letter shows the position of infrared?

Tick (✓) **one** box.

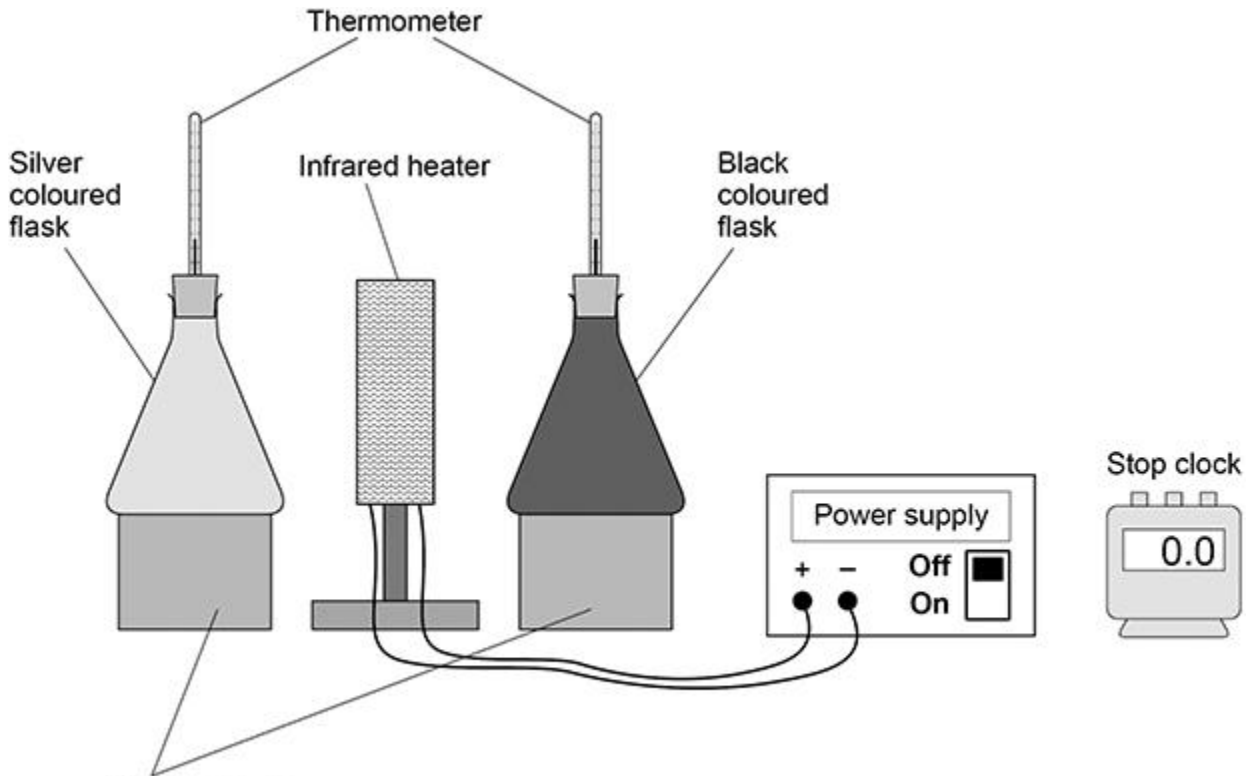
A ☐ **B** ☐ **C** ☐ **D** ☐

(1)

A student investigated how the colour of a surface affects the amount of infrared the surface absorbs.

Figure 2 shows the equipment used.

Figure 2



(b) Complete the sentence.

Choose the answer from the box.

a control	**the dependent**	**the independent**

In this investigation the distance between each flask and the infrared heater

is _____ variable.

(1)

(c) The student wrote the hypothesis:

'Surface colour of the flask affects the amount of infrared absorbed when the heater is switched on for five minutes.'

Describe how the equipment in **Figure 2** could be used to test this hypothesis.

_____

_____

_____

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_____

(4)

The table below shows the results.

Colour of flask	Temperature increase in °C		
	Test 1	**Test 2**	**Test 3**
Black	19	17	27
Silver	10	12	11

(d) Which **one** of the results for the black flask is anomalous?

_____

(1)

(e) The anomalous result was caused by reading the thermometer incorrectly.

What should the student do with the anomalous result?

_____

_____

(1)

(f) Calculate the mean temperature increase for the silver flask.

_____

_____

Mean temperature increase = _____ °C

(1)

(g) What conclusion can be made from the table above?

Tick (✓) **one** box.

Both flasks absorbed the same amount of infrared during the five minutes. ☐

The black flask absorbed the most infrared during the five minutes. ☐

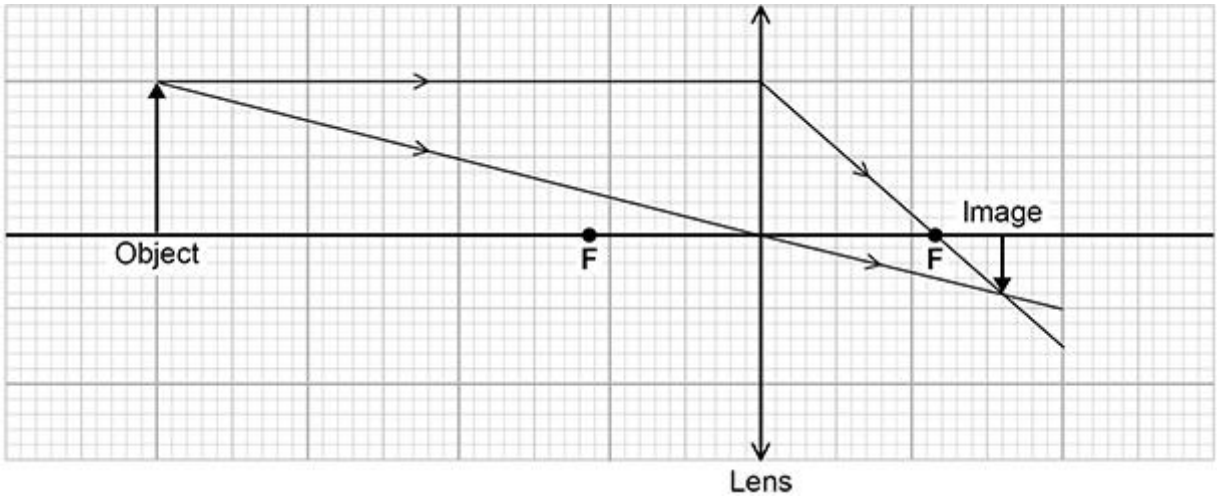
The silver flask absorbed the most infrared during the five minutes. ☐

(1)

(Total 10 marks)

Q2.

The graph below shows how a lens forms an image of an object.



(a) What type of lens is represented in the graph above?

Tick (✓) **one** box.

Concave ☐

Convex ☐

Diverging ☐

(1)

(b) Measure the image height and the object height in the graph above.

Image height = _____ cm

Object height = _____ cm

(1)

(c) Calculate the magnification produced by the lens.

Use the equation:

$$\text{magnification} = \frac{\text{image height}}{\text{object height}}$$

_____

_____

_____

_____

_____

Magnification = _____

(2)

(d) Which **two** words describe the image in the graph above?

Tick (✓) **two** boxes.

Enlarged	☐
Inverted	☐
Real	☐
Upright	☐
Virtual	☐

(2)

(e) The object was blue.

A student looked at the blue object through a green filter.

Complete the sentences.

Choose answers from the box.

black	**blue**	**green**	**red**	**white**

Looking at the blue object through a green filter makes the object

appear _____.

This is because the green filter only transmits the light that is _____.

(2)

(Total 8 marks)