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

Mark Schemes

Q1.

(a) **B**

1

(b) a control

1

(c) record the initial temperature of the two thermometers in each flask

allow initial temperature is a control variable

or

ensure initial temperature is the same in both flasks

1

switch the infrared heater on and start the stop clock (at the same time)

allow switch on the power supply for switch on the heater

1

after five minutes record the (final) temperature from both flasks

allow calculate the temperature increase / change after five minutes

1

see / check if the temperature inside the flasks had increased by different amounts

1

(d) 27 (°C)

allow 27 (°C) identified on the table

allow test 3

1

(e) ignore (the result)

allow repeat (the result)

1

(f) (33/3 =) 11

1

(g) the black flask absorbed the most infrared during the five minutes

1

[10]

Q2.

(a) convex

1

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(b) In Exampro, the measurement of 0.8 cm or 2.0 cm will depend on the printing of the exported diagram and should therefore be checked by the teacher/student using this mark scheme.

image height = 0.8 (cm)
and
object height = 2 (.0 cm)

*both correct for **1** mark*

1

(c) magnification = $\frac{\text{0.8 (cm)}}{\text{2 (.0 cm)}}$

*allow their measured object and image heights from question **(b)***

1

magnification = 0.4(0)

1

(d) inverted

1

real

1

(e) black

this order only

1

green

1

[8]

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