Name of the Student:_____
Max. Marks : 23 Marks **Time : 23 Minutes**

Mark Schemes

Q1.

(a) to stop the metal case of the toaster becoming live if a fault occurs **1**

(b) yellow **1**

brown **1**

blue **1**

(c) E = 850 × 120 **1**

E = 102 000 (J) **1**

*an answer of 102 000 (J) scores **2** marks*

(d) elastic potential **1**

kinetic **1**

(e) gravitational potential energy = mass × gravitational field strength × height

or

$E_p = m\ g\ h$

allow gpe

allow any correct re-arrangement **1**

(f) 0.049 = 0.050 × 9.8 × h **1**

$$h = \frac{0.049}{0.050 \times 9.8}$$ **1**

h = 0.10 (m) **1**

*an answer of 0.10 (m) scores **3** marks*

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Q2.

(a) the brightness of the lamp

1

(b) zero error

1

(c) C

1

(d) 10.0

allow 10

1

(e) $\frac{0.96}{8.0}$

1

= 0.12

allow 12%

1

*an answer of 0.12 or 12% scores **2** marks*

(f) replenished

1

(g)

*an answer of 15 000 (J) scores **3** marks*

E = 490 × 31

1

E = 15 190

allow 15 200 if correct substitution is seen

1

E = 15 000 (J)

allow an answer to 2 s.f. consistent with their calculated value of E using E=QV

1

(h) less fossil fuel is burned

1

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