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

Mark Schemes

Q1.

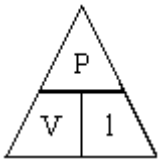
(a) 800 (W)

accept 0.8kW but this answer must have the unit

1

(b) (i) power = voltage × current

accept the equation rearranged
accept P = VI
do not accept C for current
do not accept P = VA
do not accept power = VA
do not accept



unless subsequent calculation shows understanding

1

(ii) 3.5 (A)

accept a larger number of d.p. but you must be able to round to 3.5
allow 1 mark for

current = $\frac{power}{voltage}$

or *(I =)* $\frac{800}{230}$

2

(iii) 5 (A)

independent of (ii) unless e.c.f from part (b)(ii)

1

(c) 0.95 **or** 95 (%)

allow I mark if useful energy output is given as 760 ignore any incorrect unit

2

[7]

Downloaded from www.merit-minds.com

Q2.

(a) C

award mark if A and B identified as not filament lamp

1

resistance increases

negated by wrong statement e.g. current goes down

1

as the lamp gets hot

*accept as current (through lamp) **or** voltage (across lamp) increases*

*do **not** accept non-ohmic reason independent of choice of component*

1

(b) ammeter wire and battery only in series

non standard symbols acceptable if correctly identified (labelled) for ammeter, voltmeter and battery

1

voltmeter only in parallel with wire **or** battery

*all in series **or** ammeter in parallel neither of these two marks awarded*

1

all symbols correct

ignore lines drawn through centres of symbols

1

(c) (i) voltage = current × resistance

accept V = I × R

accept volts = amps × ohms

*do **not** accept V = C × R*

accept 

if subsequent method correct

1

(ii) 30

*accept correct substitution for **1** mark (9/0.3)*

2

ohms

accept correct symbol Ω

1

(iii) goes up

must be a comparison

accept calculation if answer is larger than c (ii)

1

[11]

Downloaded from www.merit-minds.com