

Name of the Student: _____

Max. Marks : 15 Marks

Time : 15 Minutes

Mark Schemes

Q1.

	Answer	Acceptable answers	Mark
	substitute (1) $3 = I \times 12$ transformation (1) $I = 3 \div 12$ evaluation (1) 0.25 (A) Ignore any unit given by candidate	Subst. and transform. either order 1 mark only can be scored for correct substitution after incorrect transposition. Accept any number of sig. figs. that rounds to 0.25 (A) 250 <u>m</u> A gains 3 marks give full marks for correct answer, no working $2.5 \times$ any other power of ten = 2 marks eg 25 (A) gains 2 marks	(3)

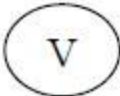
Q2.

Question Number:	Answer	Additional guidance	Mark
(i)	substitution (1) $(P) = 0.12 \times 0.24$ evaluation (1) 0.029 (W)	accept 0.03 (W), 0.0288(W) 0.028 (W) power of ten error is awarded 1 mark award full marks for the correct answer without working	(2) AO 2 1

Question Number:	Answer	Additional guidance	Mark
(ii)	chooses /uses (1) $E = V \times I \times t$ evaluation (1) 1.4 (J)	$E = 0.3 \times 0.13 \times 35$ accept an answer that rounds to 1.4 (J) e.g. 1.365(J) a maximum of 1 mark is awarded in the case of a power of ten error award full marks for the correct answer without working	(2) AO 2 1

Question Number:	Answer	Additional guidance	Mark
(iii)	substitution (1) $(Q) = 0.13 \times 35$ evaluation (1) 4.6 (C)	accept an answer that rounds to 4.6 e.g. 4.55 or in this context allow 4.5 power of ten error is awarded 1 mark award full marks for the correct answer without working	(2) AO 2 1

Q3.

	Answer	Acceptable answers	Mark
(i)	 connected in parallel with lamp (1)	recognisable symbol such as a box with letter V inside or box with the word voltmeter inside it accept voltmeter across both lamp and ammeter	(1)
(ii)	Substitution $R = 6.0 / 0.26$ (1) Evaluation $= 23$ (1))	An answer which rounds to 23 Give full marks for correct answer no working	(2)

Q4.

Question number	Answer	Additional guidance	Mark												
	<table><tr><th>part of plug</th><th>safety feature</th></tr><tr><td>cable grip</td><td>✓</td></tr><tr><td>earth wire</td><td>✓</td></tr><tr><td>fuse</td><td>✓</td></tr><tr><td>live wire</td><td></td></tr><tr><td>neutral wire</td><td></td></tr></table>	part of plug	safety feature	cable grip	✓	earth wire	✓	fuse	✓	live wire		neutral wire		<p>Note that the tick next to cable grip is already in the grid</p> <p>more than two additional ticks deduct one mark for each incorrect tick.</p>	(2)
part of plug	safety feature														
cable grip	✓														
earth wire	✓														
fuse	✓														
live wire															
neutral wire															

Q5.

	Answer	Acceptable answers	Mark
	<input checked="" type="checkbox"/> D a variable resistor		(1)