

Question number	Answer	Notes	Marks
8 (a) (i)	$P = I \times V$ ;	accept standard symbols or in words or rearranged	1
(ii)	substitution and rearrangement; evaluation;  e.g. ( $I =$ ) 110/230 ( $I =$ ) 0.48 (A)	allow 0.5, 0.47826 (A) condone 0.47, 0.4782	2
(b) (i)	any suitable suggestion; e.g. carries a high(er) <u>current</u> has low(er) <u>resistance</u>	ignore references to cable overheating/melting	1
(ii)	L or live;		1
(iii)	any suitable suggestion; e.g. double insulated does not have a metal case / has a plastic case	case is not a conductor / is an insulator	1
(c)	substitution into a suitable equation;  time in correct units;  evaluation;  e.g. ( $E = I \times V \times t$ ) ( $E =$ ) 0.17 x 230 x 55.....1 mark ( $E =$ ) 0.17 x 230 x 55 x 60...2 marks ( $E =$ ) 130 000 (J).....3 marks  OR  ( $E = P \times t$ ) ( $E =$ ) 40 x 55.....1 mark ( $E =$ ) 40 x 55 x 60.....2 marks ( $E =$ ) 130 000 (J).....3 marks	no mark for the equation as given in the paper allow if x60 / 3300 seen anywhere in working   129 030 (J) allow 131 835 for use of $V = 235V$  132 000(J)  total marks = 9	3