

Question number	Answer	Notes	Marks
6 a i	Power = current x voltage;	Accept <ul style="list-style-type: none"> rearranged equation equation in recognised symbols 	1
ii	Substitution and rearrangement; Evaluation; eg $I = 2000 / 230$ 8.7 (A)	Accept <ul style="list-style-type: none"> 9 (A) 8.695.....(A) ETC NOT <ul style="list-style-type: none"> 8.6 incorrect truncation 9.0 incorrect rounding 	1 1
iii	D 13 A		1
b	Series – single switch to control both; Parallel – independent control;	Allow idea of one element failing (and the other continuing) ignore comments about voltages or currents there is no mark for getting the 2 answers reversed	1

c	<p>i ANY FOUR FROM – MP1. earth connected to (metal) casing; MP2. If casing becomes live/ live wire touches case; MP3. Provides low resistance path (to earth); MP4. (So) large/surge current <u>in earth wire</u>; MP5. (hence) fuse breaks/melts/blows; MP6. (so) circuit switches off or current stops or supply cuts off;</p> <p>ii any two from MP1. It has a metal case; MP2. Metals/the case conducts (electricity); MP3. to prevent (user getting) a shock;</p>	<p>Allow circuit breaker(RCCB)</p> <p>DO NOT CREDIT: the electricity goes to the ground/eq for MP3</p>	<p>4</p> <p>1 1</p>
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(Total for question 6 = 12 marks)