

1a) Define what electrical current is.

b) What equation links Charge, Current and time?

c) What are the units for each variable?

2a) What is the Ohm's law equation?

b) What are the units for each variable?

c) Ohms law states that the potential difference is directly proportional to the current. What does the term directly proportional mean?

3 a) Sketch the I-V curve for an ohmic conductor (e.g. a resistor at constant temperature).

b) Describe and explain the pattern.

Component	Symbol
Switch (open and closed)	
Cell	
Battery	
Diode	
Resistor	
Variable resistor	
LED	
Lamp	
Fuse	
Voltmeter	
Ammeter	
Thermistor	
LDR	

Electricity

8a) What equation links Power, Potential difference and current?

b) What are the units for each variable?

6 a) Sketch the I-V curve for a thermistor at two different temperatures hot and cold).

b) Describe and explain the pattern.

c) How are thermistors used in real life?

7 a) Sketch the I-V curve for a LDR at two different light intensities (light and dark).

b) Describe and explain the pattern.

c) How are thermistors used in real life?

4 a) Sketch the I-V curve for a filament bulb

b) Describe and explain the pattern.

5 a) Sketch the I-V curve for a diode.

b) Describe and explain the pattern.

	Series	Parallel
Description		
Sketch of a circuit		
Rule for current		
Rule for potential difference		
Rule for resistance		
	Why is this?	Why is this?

	Direct Current	Alternating current
Description		
Sketch of Potential difference – time graph.		

9 a) What colour are and what is the role of the live; neutral AND Earth wires used in plugs and mains electricity?

b) What is the potential difference between the live and earth wires?

c) What is the frequency and potential difference of the domestic electricity supply in the UK?

11a) What equation links Energy, Power and time?

b) What are the units for each variable?

10a) What equation links Power, resistance and current?

b) What are the units for each variable?

12a) What equation links Energy, Charge and potential difference?

b) What are the units for each variable?

12a) What is the national grid?

b) What is the role of step up and step down transformers?