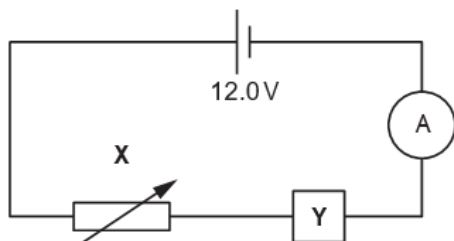


GCSE Physics B (Twenty First Century Science)
J259/01 Breadth in Physics (Foundation Tier)

Question Set 9

1 Sundip builds a circuit to investigate a mystery component.

(a) She builds this circuit. The mystery component is the box labelled Y.



(i) Add a voltmeter to the circuit to measure the potential difference across component Y.

[1]

(ii) Describe how to use component X to vary the current in the circuit.

[2]

(b) The table shows Sundip's results.

Potential difference (V)	Current (A)	Resistance (Ω)
1.0	0.68	1.47
2.0	0.93	2.15
3.0	1.13	2.65
4.0	1.30	3.08
5.0	1.45	3.45
6.0	1.59	

(i) Calculate the resistance when the potential difference is 6.0V.

Give your answer to 3 significant figures.

Resistance = Ω [4]

(ii) Describe the relationship between current and resistance.

[1]

(iii) Suggest what component Y is.

Explain your answer.

[2]

Total Marks for Question Set 9: 10

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