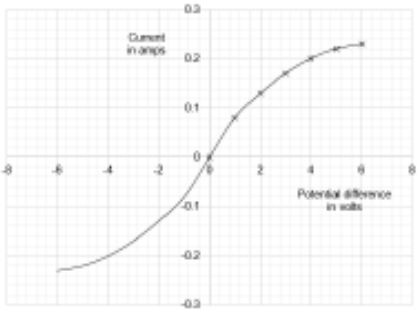
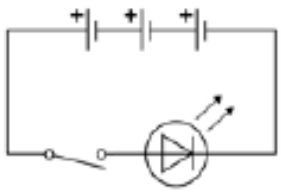
Electricity

Past Paper Answers AQA Physics GCSE

Question	Answers	Extra information	Mark
1	ammeter and voltmeter symbols correct voltmeter in parallel with lamp ammeter in series with lamp		1 1 1
2	smooth curved line of correct shape passing through - 4.0 V, - 0.2 A *or* *– 6.0 V, - 0.23 A*  	do not accept a line that becomes horizontal 2nd mark conditional on scoring 1st mark	1 1
3	potential difference = current × resistance or $V = IR$		1
4	I = 0.08 (A) 1.0 = 0.08 × R $R = \frac{1.0}{0.08}$ R = 12.5 (Ω)	 allow 1.0 = their I × R provided their I has been obtained from the graph allow $R = \frac{1.0}{\text{their I}}$ allow an answer consistent with their I	1 1 1 1

Question	Answers	Extra information	Mark
5	ammeter displays a reading when not connected (to a circuit)		1

Question	Answers	Extra information	Mark
6			1
7	charge flow = current × time or $Q = It$		1
8	I = 0.050 (A) Q = 0.050 × 14 400 Q = 720 (C)	 allow a correct substitution using an incorrectly/not converted value of I allow a correct calculation using an incorrectly/not converted value of I	1 1 1
9	there is no current in a diode (in the reverse direction) or charge will not flow through a diode (in the reverse direction) (because) a diode has a (very) high resistance (in the reverse direction)	allow diode will not conduct (electric charge) do not accept the circuit is not complete	1 1
10	Efficiency = $\frac{\text{Useful power output}}{\text{Total power input}}$		1

Question	Answers	Extra information	Mark
11	$0.75 = \frac{\text{Useful power output}}{0.24}$ Useful power output = 0.75 × 0.24 Useful power output = 0.18 (W)		1 1 1