

Electricity - Energy Transfers**Past Paper Answers AQA Physics GCSE**

Question	Answers	Extra information	Mark
1	A: transmission / power cables	allow transmission / power lines allow cables ignore wires	1
	B: <u>step-down transformer</u>		1
2	less thermal energy is transferred to the surroundings.		1
3	charge flow = $\frac{500\,000\,000}{25\,000}$		1
	charge flow = 20 000 (C)		1
4	total current = 7.20 (A)		1
	$P = 230 \times 7.20$	allow a correct substitution of an incorrect total current	1
	$P = 1656$ (W)	allow a correct calculation using an incorrect total current	1
5	dishwasher		1
	has the largest current		1
	or has the largest power (input)		
6	$E = 600 \times 32\,000\,000$		1
	$E = 19\,200\,000\,000$ (J)		1
	or $E = 1.92 \times 10^{10}$ (J)		

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7	the polarity (of the supply) does not change	allow potential difference in one direction (only)	1
8	energy transferred = power × time		1
9	$162\,000\,000 = 7200 \times t$ $t = \frac{162\,000\,000}{7200}$ $t = 22\,500 \text{ (s)}$		1 1 1
10	$V = I \times R$		1
11	$480 = 15 \times R$ $R = \frac{480}{15}$ $R = 32 \text{ (}\Omega\text{)}$		1 1 1
12	time taken using system A is double the time of system B		1