

Multiple Choice Answers

Q31: D

Multiple Choice Answers

Q32: D

Multiple Choice Answers

Q34: D

Multiple Choice Answers

Q30: B

6(a)	energy transferred (to the component) per (unit) charge
6(b)(i)	$Q = It$ $= 0.030 \times 4.0 \times 60$
	$= 7.2 \text{ C}$
6(b)(ii)	$I = V / R$ $I_1 = 8.0 / (430 + 240)$
	$= 0.012 \text{ A}$
6(b)(iii)	$I_2 = 0.030 - I_1$ $= 0.030 - 0.012$ $= 0.018 \text{ A}$
6(b)(iv)	$R = V / I_2$ $= (8.0 - (0.018 \times 210)) / 0.018$
	$= 230 \Omega$
	OR
	resistance of top branch $= 8.0 / 0.018$
	$R = 8.0 / 0.018 - 210$
	$= 230 \Omega$
	OR
6(c)	(When) the galvanometer reads 0 (A)
	The ratio of the resistances in the top branch will equal the ratio of the resistances in the bottom branch (so the resistance of X can be determined)
	OR
	The ratio of the left pair of resistances will equal the ratio of the right pair of resistances