

Question number	Answer	Notes	Marks
6 (a) (i)	B turbine		1
(ii)	C generator		1
(b) (i)	power = voltage x current	Allow: equivalent arrangements Allow: $P=IV$ etc Reject use of units for quantities	1
(ii)	Correct equation (any arrangement); e.g.: power in = power out / $V_{IN}I_{IN} = V_{OUT}I_{OUT} / I_{IN}$ / $I_{OUT} = V_{OUT}/V_{IN}$ Correct substitution; e.g.: $V_{OUT}/V_{IN} = 115/25$ (or 4.6) OR $I_{OUT} / I_{IN} = 25/115$ (or 0.22) Correct deduction based on working: e.g. output current is smaller	Accept: 5/23 and correct conversion to volts Bald 'output current smaller' = 0 mark Bald 'output current 4.6 times smaller' = 3 marks	3
(iii)	(lower current leads to) less (resistive) energy /heat/ power losses		1