Question number	Answer		Mark
16(a)	• Varying current, so varying magnetic field • Change in flux linkage with plasma (loop) **Or** magnetic field lines cut plasma (loop) • Emf induced • Plasma makes a complete circuit, so current (in plasma)	1 1 1 1	**(4)**
16 (b)(i)	• Use of $R = \rho l/A$ • $R = 1.89 \times 10^{-7}$ (Ω) Example of calculation $R = 3.30 \times 10^{-8}$ Ω m × 13.2 m / 2.30 m^2 $= 1.89 \times 10^{-7}$ Ω	1 1	**(2)**
16(b)(ii)	• Use $\varepsilon = \mathrm{d}\phi / \mathrm{d}t$ • Use of $I=V/R$ [ecf for R] • Use of $P = IV$ **Or** Use of $P = I^2 R$ [Use of $P = V^2 / R$ for MP2&3] • $P = 2.42$ MW Example of calculation $\varepsilon = 16.9$ Wb / 25.0 s $= 0.676$ V $I = 0.676$ V / 1.89×10^{-7} Ω $= 3.58$ MA $P = 3.58$ MA × .676 V $= 2.42$ MW	1 1 1 1	**(4)**
	Total for Question 16		**10**