

Question number	Answer	Notes	Marks
10 (a)	(coil rotates) through magnetic field / cutting field lines; voltage is <u>induced</u> ;	allow idea of coil experiencing a changing flux ignore current is induced accept p.d. or potential difference for 'voltage'	2
(b) (i)	idea that d.c. is current in one direction only; diode allows current flow in one direction only/eq;		2
(ii)	higher speed generates higher voltage; higher voltage causes higher current;	ignore references to energy allow higher tier answers in terms of increased flux linkage i.e cutting field lines faster accept p.d. or potential difference for 'voltage'	2
(c)	substitution into given equation 'E = IVt'; rearrangement; evaluation; e.g. $14\,000 = I \times 7.2 \times 8400$ (current =) $14000 / (7.2 \times 8400)$ (current =) 0.23 (A)	-1 POT error treat misconversion of time as a POT error allow 0.23...(A) allow 0.2 (A)	3

Total for Question 10 = 9 marks