

Question number	Answer	Mark
11(a)	<ul style="list-style-type: none"> Calculate period = $8.3 \text{ s} \div 10 = 0.83 \text{ s}$ or calculate $f = 10 / 8.3 \text{ s} = 1.2 \text{ Hz}$ (1) Use of $\omega = 2\pi / T$ or Use of $\omega = 2\pi f$ (1) $\omega = 7.6 \text{ rad s}^{-1}$ (1) <p><u>Example of calculation</u> $T = 8.3 \text{ s} \div 10 = 0.83 \text{ s}$ Use of $\omega = 2\pi / T$ $\omega = 7.6 \text{ rad s}^{-1}$</p>	3
11(b)	<ul style="list-style-type: none"> Use of $F = BIl \sin \theta$ (1) $F = 2.0 \times 10^{-3} \text{ N}$ (1) direction is out of page (1) <p><u>Example of calculation</u> $F = 0.053 \text{ T} \times 1.1 \text{ A} \times 3.5 \times 10^{-2} \text{ m} \times \sin 80^\circ$ $= 2.0 \times 10^{-3} \text{ N}$</p>	3
	Total for question 11	6