

Question	Answer	Marks	AO Element	Notes	Guidance
1(a)	any <b>four</b> from: needle oscillates (as magnet moves up and down) (1) coil cuts magnetic field / magnetic field changes (as magnet moves) (1) changing (magnetic) field <u>induces</u> voltage / current (1) induced voltage / current opposes the motion / change causing it (1) force, magnetic field and induced current are mutually perpendicular (1)	<b>4</b>			
1(b)	larger (maximum) deflection	<b>1</b>			
2(a)	Minimum of one arrow, pointing clockwise, on the wire, not contradicted (1)  Field direction, motion of wire and induced current are mutually perpendicular OWTTE (1)	<b>2</b>			

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2(b)	<p>(as coil rotates) it cuts (magnetic) field between the magnets (1)</p> <p>This induces an e.m.f. / voltage / p.d. (in the coil) (1)</p> <p>This produces a current in the (coil transferred to the) galvanometer (via the slip rings and carbon brushes) (1)</p> <p>Direction of current flow changes with each 180 degree rotation of coil (1)</p>	4			
[Total: 11]					