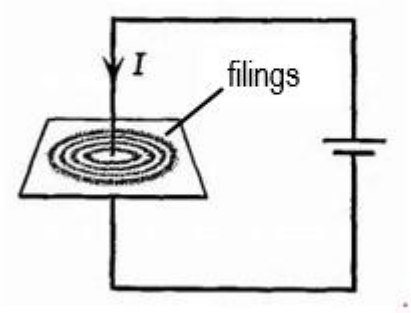
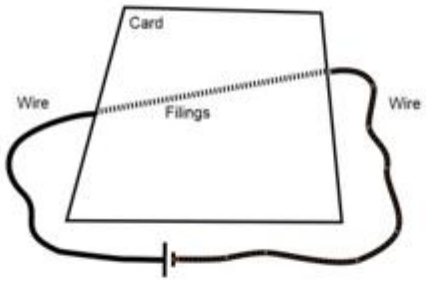
Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 12_Magnetism and the motor effect

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

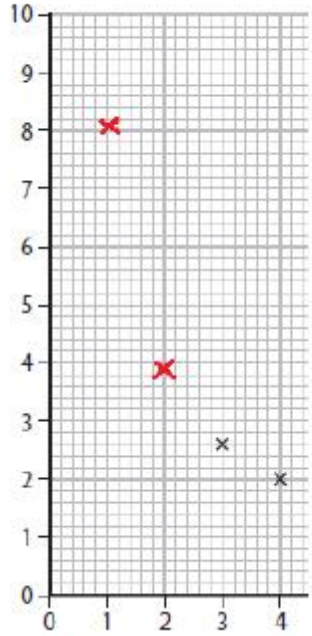
Mark Schemes

Q1.

Question Number	Answer	Additional guidance	Mark
	An answer that combines four of the following points. MP1: Put wire {through card / near card / under card / over card / round rolled up card } (1) MP2: Put iron filings on card / around wire (1) MP3: Connect wire to power pack One wire is acceptable (1) MP4: Switch on or reference to current / charges flowing (in wire) NOT in filings (1) MP5: Filings attracted / moving / see if wire attracts filings (1) MP6: Pattern seen in filings – circles / lines / onion (1)	IGNORE use of apparatus not specified in the list (Iron nails etc)   marking points can be scored from a diagram filings show shape of field	(4)

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Q2.

Question number	Answer	Additional guidance	Mark
i	 One mark for each point plotted correctly, to within ± 1 small square		(2) AO2

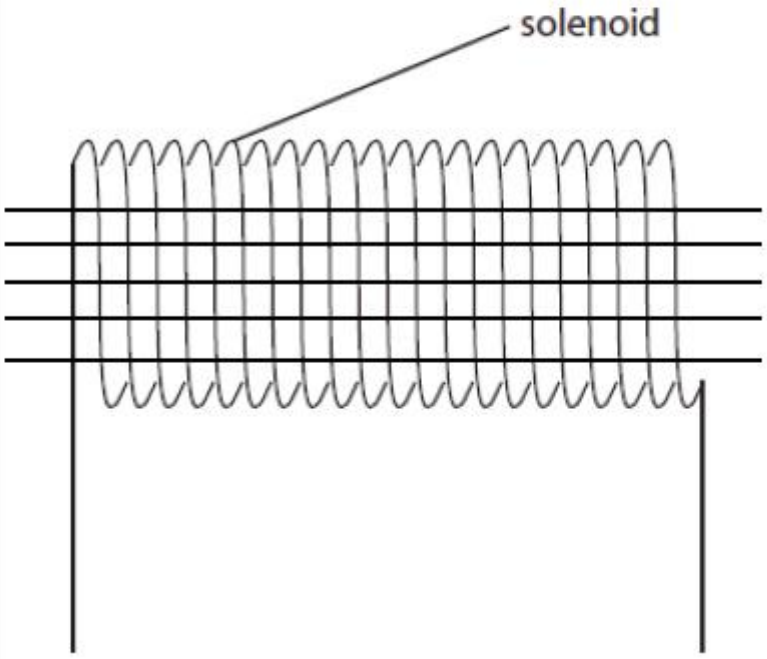
Question number	Answer	Additional guidance	Mark
ii	smooth curve drawn fitting the plotted points (1)	judge by eye	(1) AO2

Question number	Answer	Additional guidance	Mark
iii	substitution using an attempt at calculation – any subtraction seen (1) e.g. 2(.0) – 1(.0) evaluation (1) (-) 1(.0) (mT)	 accept any number that rounds to 1.0 award full marks for correct answer without working	(2) AO3

Question number	Answer	Mark
iv	(size of) current	(1) AO1

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Q3.

Question number	Answer	Additional guidance	Mark
	magnetic lines of force closely packed AND (almost) parallel (1)	ignore any arrows as direction of field is not required ignore any lines outside the coil 	(1)

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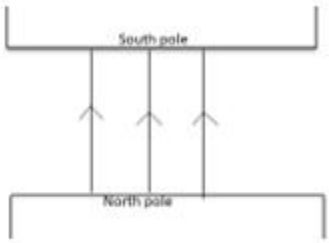
Q4.

Question number	Answer	Additional guidance	Mark
i	circle shown around wire (1)	allow tolerance for translation of 3D to 2D ignore any multiplicity of those circles	**(1)** **AO1**

Question number	Answer	Additional guidance	Mark
ii	arrow indicating a clockwise direction (for magnetic field line drawn for i) (1)		**(1)** **AO1**

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Q5.

Question Number	Answer	Additional guidance	Mark
	 MP1: any (vertical) line from pole to pole (1) MP2: at least two further equidistant straight, (vertical) lines from pole to pole (1) MP3: arrow on any line, north to south (1)	ignore lines outside of the magnets for MP1 and MP2 judge by eye any arrow south to north, no mark awarded for MP3	**(3)**

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Q6.

Question number	Answer	Additional guidance	Mark
	an explanation linking any **two** of		**(2)**
	steel is magnetic (material) (1)	steel attracted / sticks to / carried round by magnet/roller)	
	aluminium is non-magnetic (material) (1)	is not attracted / does not stick (to magnet roller)	
	steel falls into container A / aluminium falls into container B (1)	steel cans are carried further round than aluminium and fall into A steel hangs on for longer / aluminium falls quicker	

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