AQA GCSE Science Combined Foundation

Practice answers

Question	Answers	Extra information	Mark	AO / Specification reference
01.1	B and C	both needed for the mark	1	AO1 6.7.1.1
01.2	A		1	AO1 6.7.1.1
01.3	non-contact permanent force magnetic		1 1 1 1	AO1 6.7.1.1
02.1	a permanent magnet is always magnetic an induced magnet becomes magnetic when it is put in a magnetic field		1 1	AO1 4.7.1.1
02.2	yes (it has become an induced magnet) any magnet has a magnetic field around it		1 1	AO2 4.7.1.1
02.3	Left box 'N', middle box 'S', right box 'N'		1	AO2 4.7.1.1
02.4	no it is no longer magnetic when it is removed from the magnetic field		1 1	AO2 4.7.1.1
03.1	neodymium		1	AO2 6.7.1.1
03.2	bar chart the magnets are names/words/categorical		1 1	AO2 6.7.1.1

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03.3	the Earth's magnetic field would be very difficult to plot on the same scale		1	AO3 6.7.1.1
03.4	you can turn it on and off **or** you can make an electromagnetic that is much stronger than a permanent magnet		1	AO3 6.7.2.1
04.1	one mark for correct shape – at least four lines drawn one mark for arrows going from north to south		2	AO1 6.7.1.2
04.2	a compass/iron filings		1	AO1 6.7.1.2
04.3	cobalt nickel		1 1	AO1 6.7.1.2
05.1	acceleration = $\frac{\text{change in velocity}}{\text{time}}$	accept a = $\frac{\Delta v}{t}$	1	AO1 6.5.4.1.5
05.2	acceleration = $\frac{2.7 - 0.5}{0.4}$ = 5.5 m/s^2		1 1	AO2 6.5.4.1.5
05.3	force = mass × acceleration	accept F = ma		AO1 4.5.6.2.2

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05.4	2.0 = 0.4 × acceleration acceleration = $\frac{2.0}{0.4}$ = 5.0 m/s^2		1 1 1	AO2 6.5.4.2.2
05.5	there is an uncertainty in all measurements/difficult to pull with a constant force		1	AO3 6.5.4.1.5 6.5.4.2.2
06.1	material iron force weaker		1 1 1 1	AO1 6.7.2.1
06.2	it gets stronger		1	AO2 6.7.2.1
07.1	higher shorter the same		1 1 1	AO1 6.6.2.1
07.2	increases the risk of skin cancer **or** causes premature aging		1	AO1 6.6.2.3

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OXFORD Revise

Question	Answers	Extra information	Mark	AO / Specification reference
07.3	correct use: • tanning • energy efficient lamps • checking for forgeries • killing insects/bacteria		1	AO1 6.6.2.4
08.1	electromagnet stronger		1 1	AO1 6.7.2.1
08.2	there is a magnetic field around the electromagnet the paperclip is mad from steel, which is a magnetic material	accept paperclip is attracted to the electromagnet	1 1	AO3 6.7.2.1
08.3	smaller distance from the electromagnet/strength of magnetic field is weaker than before		1 1	AO3 6.7.2.1
08.4	yes, it will move there is a magnetic field around the wire		1 1	AO3 6.7.2.1 6.7.2.2
09.1	(towards) north/the north magnetic pole there is a magnetic field around the Earth		1 1	AO1 6.7.1.2
09.2	the magnetic field around the wire is stronger than the magnetic field of the Earth the needle of the compass changed direction when the current was switched on		1 1	AO2 6.7.1.2
09.3	a compass needle is a magnet		1	AO1 6.7.1.2

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10.1	the wire will get hot when it is connected to the battery only connect the wire for short periods of time		1 1	AO2 6.7.2.1
10.2	magnetic field with the same shape as that of a bar magnet		1	AO1 6.7.2.1
10.3	solenoid B it has more turns		1 1	AO2 6.7.2.1
10.4	the compass needle does not move the field in the centre of a solenoid is uniform/does not change		1 1	AO2 6.7.2.1