

Examiners' Report/ Principal Examiner Feedback

November 2009

IGCSE

IGCSE Physics (4420) Paper 1F

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Publications Code UG022383

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Question 1

In part (a) either 'friction' or 'gravity' was seen. In (b)(i) GPE and KE were often seen the wrong way round although (ii) and (iii) were often correct.

Question 2

Hooke's law was not always identified and hardly ever written out correctly. However (b)(iii) on plastic behaviour was well answered.

Question 3

Mostly candidates could not identify the electrical components in this question and so had little idea how to change the resistance of an LDR. 'Change the current' was a common answer.

Question 4

Candidates showed a reasonable knowledge of waves often scoring three or four marks on this question.

Question 5

Many candidates scored well on this question about the use of parts of the electromagnetic spectrum with little crossing out seen.

Question 6

Hardly any candidates thought that all six sources could be used for electricity generation though most suggested four or five. The rest of the question was well answered.

Question 7

Candidates showed a very poor knowledge of the structure of the atom appearing to insert the words from the box in a random fashion.

Question 8

The type of question in (a) is rarely answered well and this was no exception. The arrow from the centre of gravity either did not appear or was drawn horizontally. The calculation was well done with some correctly following the instruction to give the answer to the nearest whole number.

Question 9

The first mark in (a)(i) was rarely scored although the second mark was usually the only mark scored on this question.

Question 10

Part (a) was well answered although few recognised the description of a liquid in (b).

Question 11

Some candidates failed to mention that when the fuse wire melts this breaks the circuit. The calculation was well done with many candidates scoring all three marks in (b). Candidates were less sure about the choice of fuse in (c). A wide variety of answers, such as electric kettle, were acceptable in part (d).

Question 12

Most candidates did not have sufficient understanding to score well on this question. Some were able to name a source of background radiation other than cosmic rays. In part (b) the idea that, in space, there would not be any molecules to interact with alpha particles was not understood. The graph work was disappointing and generally the idea of 'half-life' was not known.

Question 13

Part (a), where three marks were awarded for the definition of work done, rarely scored well with 'velocity' often appearing in the first gap. The calculations were well done.

Question 14

Part (a) was poorly answered and in (b) a mark was occasionally scored for 'rising' in a description of convection.

Question 15

In part (a) candidates knew that magnetic field lines show the shape of a magnetic field but were not confident about a second description.

The drawing of field lines in (b)(i) was disappointing with few arrows seen and many candidates only drawing one line. In (b)(ii) and (iii) there was some confusion with some candidates viewing the magnets vertically and acted on by gravity.

Question 16

Reflection was the best known of the wave behaviours. Few were able to state that the wavelength reduces in diagram C but in (c) a few obtained full marks with an example showing at least three equally spaced concave wave fronts.

PHYSICS 4420, GRADE BOUNDARIES

Option 1: with Written Alternative to Coursework (Paper 3)

	A*	A	B	C	D	E	F	G
Foundation Tier				53	43	33	23	13
Higher Tier	81	68	55	43	32	26		

Option 2: with Coursework (Paper 04)

	A*	A	B	C	D	E	F	G
Foundation Tier				N/A	N/A	N/A	N/A	N/A
Higher Tier	83	70	57	45	34	28		

No candidates at foundation tier entered coursework so there are no grade boundaries for this category.

Note: Grade boundaries may vary from year to year and from subject to subject, depending on the demand of the question paper.

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