

Examiners' Report/ Principal Examiner Feedback

June 2010

GCSE

360Science

GCSE Science
Multiple Choice Paper P1b (5010)

GCSE Physics
Multiple Choice Paper P1b (5046)

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5010 Science/ 5046 Physics Examiners' Report
Multiple Choice paper P1b
June 2010

Foundation tier

Overall the performance of candidates in the first sixteen questions showed that they had been well prepared for this module test. In 10 out of the first 16 questions over 50% of candidates opted for the correct response.

The Foundation Tier proved quite difficult with one of the lowest means in the series to date. It was disappointing that only 56% of candidates could identify a description of the solar system and only 48% knew that mobile phones use microwave radiation.

Only 21% of candidates correctly identified a longitudinal wave in a Slinky and less than 20% of candidates correctly identified the amplitude and wavelength of a wave. Candidates displayed good knowledge of comets with over 60% of candidates correctly identifying the orbit of a comet and almost 70% identifying comets as the most likely object to collide with the Earth. Candidates also showed a good understanding about the probability of there being extra terrestrial life.

Common Questions

Most of the common questions differentiated well between Foundation and Higher tier candidates and in the respective tiers most discriminated well between strong and weak candidates. However, a surprisingly high level of difficulty was encountered when candidates were asked to calculate the weight of 300 g. Only 7% of F tier and 11% of H tier answered this question correctly, making it the "most difficult" question on both papers.

Most candidates showed a good understanding of the properties of electromagnetic radiation and were able to correctly identify a prediction. A significant number of candidates in both tiers found interpolating the scales in question 24 difficult.

Higher tier

Overall the performance of candidates in the last sixteen questions showed that they had been well prepared for this module test. In 10 out of the last 16 questions 50% or more of the candidates opted for the correct response.

The mean for the Higher tier was about average for this series.

Candidates demonstrated a good understanding of space, dangers of UV radiation and optical fibres. However 55% of candidates thought that light travels faster than other electromagnetic radiation in a vacuum and 45% of candidates could not rearrange the formula: $\text{speed} = \text{distance} / \text{time}$.

Candidates showed a good understanding of gravity and black holes but only 34% recalled that the reaction force is the same size but in the opposite direction to the action force.

Grade Boundaries - June 2010

Multiple Choice Papers - GCSE Science

Raw Mark Grade Boundaries

5005/5025	Max mark	A*	A	B	C	D	E	F	G
H	24	20	18	15	12	9	7		
F	24				16	13	10	7	4

5006/5026	Max mark	A*	A	B	C	D	E	F	G
H	24	20	17	14	12	9	7		
F	24				15	13	11	9	7

5007/5035	Max mark	A*	A	B	C	D	E	F	G
H	24	20	17	14	11	8	6		
F	24				16	13	10	8	6

5008/5036	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	14	12	9	7		
F	24				16	13	10	8	6

5009/5045	Max mark	A*	A	B	C	D	E	F	G
H	24	16	14	12	11	8	6		
F	24				14	12	10	8	6

5010/5046	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	14	12	8	6		
F	24				14	12	10	8	6

Uniform Mark Grade Boundaries for these units

	Max UMS	A*	A	B	C	D	E	F	G
H	40	36	32	28	24	20	18		
F	27				24	20	16	12	8

Note: On higher tier papers, the "allowed" grade E is calculated as half a grade width

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