

Examiners' Report/
Principal Examiner Feedback

November 2011

360Science

GCSE Science
Multiple Choice Paper P1b (5010)

GCSE Physics
Multiple Choice Paper P1b (5046)

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Publications Code UG029793

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5010/ 5046 (P1b) Examiners' Report November 2011

Foundation Tier

Overall the performance of candidates in the first sixteen questions showed that they had been well prepared for this module test. In 11 out of the first 16 questions over 50% of candidates opted for the correct response.

The majority of candidates coped extremely well with a series of questions on space. However, it was disappointing that about 50% did not know that a star is formed from dust and gas pulled together by the force of gravity, with 22% stating it was due to magnetic forces.

Candidates also coped well with the suite of questions on the use of waves. The questions on the electromagnetic spectrum proved more difficult and a lack of knowledge was evident when only 33% of candidates knew that all electromagnetic waves are transverse waves.

Most candidates also showed they were able to use a graph showing the relationship between mass and weight but, less than 10% knew that objects accelerate downwards when dropped near the Moon's surface.

Common Questions

Most of the common questions differentiated well between Foundation and Higher Tier students 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 about mass and weight. Almost 55% of foundation tier and 50% of higher tier candidates thought that the weight of an object is proportional to atmospheric pressure.

Most candidates showed a good understanding of waves but calculating the frequency of a wave proved to be unexpectedly difficult in both tiers.

Higher Tier

Overall the performance of candidates in the last sixteen questions showed that they had been well prepared for this module test. In 8 out of the last 16 questions 50% or more of the candidates opted for the correct response.

Candidates demonstrated a good understanding of ultraviolet radiation. However, in the questions about space exploration only 44% could correctly identify the orbits of a comet and an asteroid.

The suite of questions on space and rockets were well answered with candidates displaying a good understanding of black holes and the life cycle of stars.

The first question on seismic waves proved more difficult than anticipated but over 70% were correct in Q36.

The final set of questions on waves threw up the usual assortment of errors. Over 60% of candidates made the usual mistake of failing to double the distance in Q37 and almost 40% of candidates thought that low energy X-rays could cause more damage than high energy X-rays. In Q40 only about one third of candidates could correctly use powers of 10 to calculate wavelength.

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