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Examiners' Report/ Principal Examiner Feedback

Summer 2015

Pearson Edexcel GCE in Advanced Subsidiary Physics (6PH03) Paper 1A and 1B Exploring Physics

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General Comments

2016 is the final year in which candidates undertaking a two year A level course will be examined, so, although there will be a 'legacy' entry in June 2016, 2015 was the last main entry for 6PH03.

There are two routes assessment for this unit: internal moderation (1A) and external marking (1B). The same assessment criteria are used for each route, and unless otherwise stated the comments below apply to both routes.

Many candidates showed that they had gained useful skills from their course and produced some excellent work.

The assessment criteria are published and should be made available to all candidates: they should be read in conjunction with this report.
For the 1A route, annotation using the marking codes is required. The moderators were pleased to receive helpful notes, including details of internal moderation. For both routes any briefing notes given to candidates should have been sent with the scripts. Without this information it was difficult to moderate or mark some criteria in the visit, planning and analysis sections.

The report on the visit or case study

This section is the only part where word processing is allowed: not all centres enforced this.

Whether a case study or a visit was carried out, all references should have been acknowledged. Referencing has improved over the lifetime of the specification but some centres continued to miss the requirement in a case study for the use of three different **types** of sources rather than just three different web based sources. The date on which a website was consulted was required and complete details of books.

Some 1A centres continued to credit R2 for general subheadings rather than just in the summary as required.

Experimental Skills

Very few centres this year allowed candidates to work together rather than individually as required.

Planning

The planning should have been written before the experiment was carried out and no further planning marks can be given for planning points made in any subsequent work. For P3 and 5, many candidates did not refer to the size of expected quantities and relate this to the size of the scale division on the instrument to be used, preventing the award of these criteria.

When commenting on whether repeat readings were necessary (P9), candidates should have supported their comment with some reasoning. "I will draw a graph" without further qualification was not sufficient for the award of P11: full details of all data treatment were expected for this criterion. If all details of the planned procedure had been given, an additional step by step method was not required (P14): although this was a safety net for many candidates.

In **Implementation and Measurement** the majority of candidates scored highly.

For M1 students were expected to give consistent and realistic numbers of significant figures in their measured values. Some candidates stated in planning that they would make measurements with a metre rule because it had a precision of +/- 0.5 mm and then recorded results only to 0.1 m: they could not then be awarded M1. They were also expected to record any repeated values for measurements such as the radius of a wire. Most candidates used units correctly, but not always in the conclusion. At least six sets of measurements were expected.

Analysis

A surprising number of candidates continued to find it difficult to draw a line of best fit, forcing it through favoured points rather than drawing it to represent the overall trend. When describing the trend (A5) candidates are required to use precise scientific language and this appears to have improved over the lifetime of the specification. General comments such as a 'positive correlation' do not merit the award of this criterion. Some centres teach uncertainties very well, however, in other centres few examples of percentage uncertainty in even one quantity were seen. Conclusions (A11) did not always match the findings or the aim: centres that do not provide candidates with a straightforward analytical title put their candidates at a disadvantage here.

Administrative matters

There are exemplar, guidance material, and relevant forms on the Edexcel websites but it was clear that not all centres had accessed the latest versions of these. Centres are reminded to use the most up-to-date paperwork, which includes record sheets to be signed by the candidate and teacher: this is an Ofqual Code of Practice requirement.

Moderators and examiners were very grateful to those centres that ensured that work for each candidate was written on one side of the page, clearly in three parts, held together by a long treasury tag, named, and with pages numbered. Some centres are still using plastic envelopes for candidate work: these are time consuming for moderators and examiners and insecure, particularly if the sheets inside are not numbered and are in the wrong order. Details of briefings given to candidates (for both 1A and 1B) and details of internal standardisation (for 1A) should be provided. For the 1A submission route, work must be annotated, preferably with Edexcel codes near where marks are awarded, and incorrect physics marked as such.

The attention of all centres is drawn to the Ask the Expert and other coursework support including podcasts: details are on the Edexcel website.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:
http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx

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