



External Assessment Report 2013

Subject(s)	Electrical Installation Fundamentals
Level(s)	Intermediate 2

The statistics used in this report are pre-appeal.

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published question papers and marking instructions for the examination.

Comments on candidate performance

General comments

There were 46 candidate entries for the *Electrical Installation Fundamentals Intermediate 2* project, compared with 63 in 2012 and 67 in 2011. It should, however, be noted that one centre enters candidates at other points in the year, so total entries for 2013 were more than 46.

Four centres presented candidates for the 2013 examination diet. There were no returning centres or new centres in 2013. This compares with five centres in 2012 and six centres in 2011. All entries into the Course in 2013 were from further education colleges, the same as has been the case since the award was first offered.

The statistics below are based on the main completion date, which may appear to point to a decline in candidate performance over the last two years, although one centre was not included in the statistics this year, which may have had an impact. Markers have commented that the standard of candidate project work does not appear as good as in previous years, with some candidates, for example, missing out whole sections in the Development component.

Areas in which candidates performed well

Planning component

- ◆ Some candidates made a serious attempt to define the aims and objectives of their project, although there is still scope for greater improvement.
- ◆ Most timescales for completing the work on the garage or workshop were realistic.

Development component

- ◆ There were some very good examples of risk assessments prepared by candidates, with the assessment of risk being clear and realistic.
- ◆ Some candidates had produced their site plan using CAD facilities, and these drawings tended to be accurate and complete.
- ◆ Most candidates produced detailed and accurate materials lists.
- ◆ Many candidates identified up to 10 good practice points, although there is still scope to identify even more good practice points (ie15).
- ◆ Most candidates identified at least three out of the four correct tests to conduct on their electrical installation and also managed to get these tests in the correct sequence. Test results were in general also accurate.

Evaluation component

Most candidates indicated that their project had been successful and also identified what steps they had taken to overcome any problems they encountered in their project.

Areas which candidates found demanding

Planning component

- ◆ A few candidates gave good reasons for choosing the garage over the workshop or vice versa (eg because I wanted to learn more about a particular area), but in general the rationale for choosing one project over the other is still poor.
- ◆ Many candidates still fail to identify their method for recording progress.

Development component

- ◆ Most candidates fail to put in circuit diagrams of 1-way/2-way lighting circuits or radial/ring circuits.
- ◆ A significant number of candidates left out the section on cable sizes/rating of protective devices.
- ◆ Earthing arrangements tend to be regurgitated from books/internet. Candidates should emphasise that all metal parts should be bonded.

Evaluation component

- ◆ Most candidates continue to fill the report for this section with a restatement of what they have done in the project. Evaluation tends to be limited to the latter stages of the report.
- ◆ Candidates often fail to mention if all work has been carried out to schedule (an obvious point to comment on).
- ◆ Candidates often limit the knowledge or skills they have developed as a result of doing the project to electrical installation skills. Whilst these are very important, there are other skills that could be mentioned, such as the development of information and communication skills when, for example, they have to prepare their materials list; communication skills when preparing the information that goes into their report, etc.
- ◆ Candidates often do not challenge the planning process sufficiently. For example, in light of doing the project, how could the planning process have been improved? Were there other questions that could have been asked in relation to interpreting the brief? More generally, were there other questions that could have been asked?

Advice to centres for preparation of future candidates

It is important to emphasise that the *Electrical Installation Fundamentals Intermediate 2* is a project in which candidates are expected to apply the knowledge, understanding and skills they have gained in the three individual units making up the Course. While the teacher/lecturer should provide the appropriate information and guidance for the project, candidates should be expected to undertake much of the project on their own initiative.

There was some indication that some centres may be delivering the project as a classroom activity in which candidates complete a section or sections of the project every week. Gaps in some candidate project work may be due to them being absent from class in certain weeks. This classroom-based approach is not good practice. Encouragement should be given to candidates to undertake project work on their own initiative.

Centres are advised to carefully monitor the level of plagiarism and collusion amongst candidates. Whilst candidates may obtain information from the same source, they should be

encouraged to express this information in their own words rather than simply copying and pasting diagrams and texts from other sources.

Some candidates missed out whole sections of the Development component. In some instances candidates did some sections of this component very well while entirely missing out other sections, with the result that they did not obtain as high a mark as they could have done. If not already doing so, centres are advised to emphasise to candidates the importance of completing every section in the Development component.

It is recognised that evaluation is a process that some candidates find challenging. It is recommended that candidates are provided with practice sessions on evaluative thinking and writing before they undertake the report for the Evaluation component.

The quality of spelling and grammar in many candidate submissions is still poor.

Statistical information: update on Courses Intermediate 2

Number of resulted entries in 2012	83
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Number of resulted entries in 2013	75
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Statistical information: Performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark 200				
A	9.3%	9.3%	7	140
B	28.0%	37.3%	21	120
C	16.0%	53.3%	12	100
D	4.0%	57.3%	3	90
No award	42.7%	100.0%	32	-

General commentary on grade boundaries

- ◆ While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.
- ◆ Each year, SQA therefore holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.
- ◆ The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ Where standards are comparable to previous years, similar grade boundaries are maintained.
- ◆ An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in, say, Higher Chemistry, this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related, as they do not contain identical questions.
- ◆ SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.