



External Assessment Report 2014

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

The statistics used in this report are prior to the outcome of any Post Results Services requests

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 79 candidate entries for the Electrical Installation Fundamentals Intermediate 2 project in 2014, compared with 75 in 2013.

Four centres presented candidates for the 2014 examination diet. There was one returning centre and one new centre. This compares with four centres in 2013 and five in 2012. All entries into the course in 2014 were from further education colleges; the same as has been the case since the award was first offered.

In 2014, 75.9% of candidates achieved an A to C grade. This compares with 53.3% in 2013. It should be noted that the pass rate in 2013 was significantly influenced by a high number of candidate failures from one centre. This did not occur in 2014, although it should be noted that one centre withdrew all candidates but one from the course. Of the candidates who failed in 2014, 5.1% were graded D, while 19% of candidates achieved a No Award.

It is reasonable to conclude, even with the small numbers of entries involved over the last three years, that candidate performance in 2014 improved when compared with 2013 and 2012. Although this is the case, candidate performance would almost certainly have been significantly worse if the centre that finally entered only one candidate had entered all its candidates in 2014.

Areas in which candidates performed well

- ◆ It is good to report that some candidates made some attempt to define the aims and objectives of their project, although there is still scope for greater clarity when defining these.
- ◆ Most timescales for completing the work on the garage or workshop were realistic.

Development

- ◆ There were some very good examples of risk assessments prepared by candidates, with the assessment of risk being clear and realistic. However, some candidates still do not make an assessment of the level of risk involved with each of their hazards.
- ◆ Some candidates had produced their site plan using CAD facilities and these tended to be clearer.
- ◆ 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 (ie 15). 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 general also accurate.

Evaluation

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. This helped to give the candidates an appreciation that project work seldom goes to plan.

Areas which candidates found demanding

Planning

- ◆ The rationale for choosing the garage project over the workshop project or vice versa is still, in general, written in negative terms. It would be good to see candidates choosing one project over the other because they want to challenge themselves more and/or learn something new.
- ◆ Most candidates still fail to identify their method for recording progress and as a result lose a significant number of marks in this section.

Development

- ◆ As in previous years, most candidates fail to put in circuit diagrams of 1 way/2 way lighting circuits or radial/ring circuits.
- ◆ Many candidates left out the cable routes on their site plans.
- ◆ A significant number of candidates left out the section on cable sizes/rating of protective devices.
- ◆ Many candidates missed the Continuity of ring final circuit test. Some candidates did not get the correct sequence of tests.

Evaluation

- ◆ As in previous years, nearly all candidates start their evaluative reports by re-stating what they had done in the project. Evaluative comment tends to be limited and to be found at the latter stages of the report.
- ◆ Candidates often fail to mention whether all work has been carried out to schedule (an obvious point to comment on).
- ◆ Candidates continue to 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 fail to challenge the initial planning process sufficiently. For example, in light of doing the project how could the planning process have been improved? Were there other questions that the candidate could have asked the client at the initial planning stage? 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 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 are still some indications 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 and should be avoided, with every encouragement given to candidates to undertake project work on their own initiative.

Centres should carefully monitor the level of plagiarism and collusion that is taking place amongst candidates. It was not uncommon for markers to see in a number of candidates' reports the same diagrams and explanations regarding topics such as earthing systems. Whilst candidates may obtain information from the same source, they should be encouraged to express this information in their own words rather than simply copy and paste diagrams and texts from the internet.

It is concerning to see candidates missing 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 should emphasise to candidates the importance of completing every section in the Development component.

It is recognised that evaluation is not a process that most candidates find easy to do, especially if they do not have good English language skills. It is recommended that candidates are provided with practice sessions on evaluative thinking and writing before they undertake the report for the Evaluation component.

Finally, the quality of spelling and grammar in many candidate submissions is still poor. Any potential employer reading such reports is likely to be alarmed and frustrated at the quality of the English. While the Electrical Installation Fundamentals Intermediate 2 project is not meant to be a test in English language, centres should consider providing the necessary information, advice and support to help candidates improve the spelling and grammar in their reports.

Statistical information: update on Courses

Number of resulted entries in 2013	75
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Number of resulted entries in 2014	79
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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	5.1%	5.1%	4	140
B	34.2%	39.2%	27	120
C	36.7%	75.9%	29	100
D	5.1%	81.0%	4	90
No award	19.0%	-	15	-

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.