



**Electrical Installation Fundamentals
Intermediate 2
External Assessment Report 2008**

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

It is pleasing to report that in 2008 candidate entries are greater than in 2007. Perhaps most pleasing is that one centre that has not entered candidates for the Electrical Installation Fundamentals courses for a number of years entered candidates in 2008. However, it continues to be the Principal Assessor's recommendation that SQA actively promote the Electrical Installation Fundamentals course to employers, candidates and other stakeholders of the award.

The quality of candidate responses seen in 2008 was mixed: some of good quality while others were not of a high standard.

The Development Stage continues to be done well by most candidates. The Planning Stage is done moderately well by most candidates although most candidates continue to fail to specify the aims and objectives of the project clearly and to describe the mechanism for recording progress throughout the project. The Evaluation Stage continues to prove challenging to most candidates. It was noted that one centre marked this section with undue leniency awarding marks for statements which were not evaluative. Such practices should be avoided as they do not help candidates in the long term.

The standard of English in reports appears to have improved in 2008 although there is scope for further improvement.

Areas in which candidates performed well

As noted in the previous section most candidates do the Development Stage well. Most candidates continue to identify the key hazards involved in undertaking the garage or workshop projects and steps to minimise these hazards. However, candidates fail to make an effective assessment of the relative risk of the hazards. Most candidates provide a comprehensive stock list. The testing part of the project is normally detailed with candidates giving accurate information on the expected results from various tests. However, some candidates do get the sequence of tests in the wrong order.

In the Planning Stage most candidates explained why they preferred to do the workshop project rather than the garage project and vice versa. It is also apparent that candidates are being encouraged to source different sources of information, including the Internet, when undertaking their project.

In the Evaluation Stage most candidates identify the technical skills they have developed while undertaking their project.

Areas which candidates found demanding

As last year the project assessors have identified various areas that candidates continue to find challenging. Some of these areas are shown below:

Planning Stage

- (1) Most candidates do not define the aims and objectives of the project effectively.
- (2) Some candidates continue not to detail all the stages of the project (e.g. inspection and testing).
- (3) Most candidates are unrealistic in the timescales they present for the stages of the project.
- (4) Almost all candidates fail to include the mechanism they are going to use to monitor progress in the project.

Development Stage

- (1) As mentioned in the previous section most candidates continue not to make an effective risk assessment of the hazards they identify for the garage or workshop project.
- (2) Most candidates continue not to provide circuit diagrams for lighting and power circuits.
- (3) Most candidates continue to identify only a limited number of good practice points.

Evaluation Stage

- (1) As in previous years evaluations tend to be narrowly focussed with candidates simply repeating what they have done in the project. Candidates do not question the project planning and development processes sufficiently. For examples, it appears that almost all projects go exactly to plan. There is little comment on how project planning and development can be improved. Most candidates focus heavily on how their technical skills have improved as a result of undertaking the project but fail to mention how other skills such as communication, health and safety, investigation, information technology, problem solving and working with others skills have developed.

Advice to centres for preparation of future candidates

It is pleasing to report that most centres continue to employ their own fully developed marking scheme when assessing candidate work which helps to ensure consistency of standards. The PA's fellow external assessor has developed a very useful marking scheme which has helped to ensure consistency in external verification.

Centres should ensure that candidates include the aims and objectives of the workshop or garage project in the Planning Stage. This should help in writing up the report in the Evaluation Stage. Lecturers/teachers should also encourage candidates to include realistic estimates of the time each activity will take at the Planning Stage. This would then allow candidates in their evaluation reports to compare these estimates with the actual times spent on activities. Centres should also get candidates to record progress throughout the project as this will help in the evaluation report.

As highlighted in previous years, centres should also get candidates not only to identify the nature of hazards associated with their projects but also to assess the level of risks associated with these hazards. This is important as it is the view of the PA and his fellow external assessor that full Risk Assessment is not currently taking place in the majority of centres.

Candidates should also produce circuit diagrams, as well as wiring diagrams, for the lighting and power circuits. Centres should also encourage candidates to identify more good practice electrical installation points as part of their garage or workshop project.

While it is recognised that the Evaluation section is probably the most difficult part of the course to do the PA believes that centres should challenge candidates more in terms of getting them to answer such questions as: How could the planning process be improved? What additional knowledge and skills have you gained from doing the project (not just narrow technical skills but wider personal skills) and What other questions could have been asked?

Lecturers/teachers are encouraged to correct poor spelling and grammar.

Statistical information: update on Courses

Number of resulted entries in 2007	38
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Number of resulted entries in 2008	62
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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	12.9%	12.9%	8	140
B	19.4%	32.3%	12	120
C	30.6%	62.9%	19	100
D	8.1%	71.0%	5	90
No award	29.0%	100.0%	18	-

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.