Principal Assessor Report 2007

Assessment Panel:	**Engineering**

Qualification area

Subject(s) and Level(s) Included in this report	**Electrical Installation Fundamentals Intermediate 2**

Comments on candidate performance

General comments

It is pleasing to report that candidate entries increased to 38 in 2007 compared with 33 in 2006. 38 represents the largest number of candidates entering the Electrical Installation Fundamentals course in the last three years. Perhaps even more pleasing is that in 2007 two new further education colleges entered candidates for the course. However, it continues to be the Principal Assessor's recommendation that SQA actively promote the Electrical Installation course to employers, candidates and other stakeholders of the award.

It is pleasing to report that there continues to be a good standard of response from most candidates undertaking the Electrical Installation course. The mean mark for 2007 was 115.6 (the course is marked out of 200). It has to be reported that one centre submitted entries that where of a particularly high standard. It was evident from moderating this centre's candidates that the lecturer delivering the course had followed the guidance given in the course arrangements document closely. SQA are considering exemplifying one candidate's work from this centre which was of a particularly high standard. However, with regard to another centre candidate work failed to cover critical areas of the course specification making it very difficult for these candidates to pass.

The Development Stage continues to be done well by most candidates. The Planning Stage is done moderately well by most candidates although most candidates fail to specify the aims and objectives of the project clearly and to record the mechanism for recording progress throughout the project. The Evaluation Stage continues to prove challenging to most candidates.

The standard of English in reports appears to have improved in 2007 although there is scope for further improvement. Candidates from one centre included a significant amount of unnecessary materials in their reports.

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, while there were some very good examples of risk assessment most candidates continue not to do risk assessment effectively. Most candidates provide a comprehensive stock list. One centre's candidates made use of 'take off' sheets to identify materials quantities correctly. 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 example, 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 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 moderation.

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 encouraged candidates to include realistic estimates of the time each activity will take at the Planning Stage. This would then allow candidates to compare these estimates with the actual times spent on activities in the Evaluation Stage.

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 2006	33

Number of resulted entries in 2007	38

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	0.0	0.0	0	140
B	18.4	18.4	7	120
C	21.1	39.5	8	100
D	2.6	42.1	1	90
No award	57.9	100.0	22	-

General commentary on passmarks and grade boundaries

- While SQA aims to set examinations and create mark schemes which will allow a competent candidate to score a minimum 50% of the available marks (notional passmark) and a very well-prepared, very competent candidate to score at least 70%, it is almost impossible to get the standard absolutely on target every year, in every subject and level
- Each year we therefore hold a passmark meeting for each subject at each level where we bring together all the information available (statistical and judgmental). 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 senior management team at SQA
- We adjust the passmark downwards if there is evidence that we have set a slightly more demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- We adjust the passmark upwards if there is evidence that we have set a slightly less demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- Where the standard appears to be very similar to previous years, we maintain similar grade boundaries
- 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 are different. This is also the case for exams set in centres. And just because SQA has altered a boundary in a particular year in say Higher Chemistry 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
- Our main aim is to be fair to candidates across all subjects and all levels and maintain standards across the years, even as arrangements evolve and change.