

Moderators' Report/
Principal Moderator Feedback

Summer 2012

GCE Engineering

Unit 6934_01

Applied Engineering Systems

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The candidates' performance covered the full range of the mark spectrum, from single figure to full marks. The majority of centres presented candidate work which aided moderation but there are still centres presenting work in ring binders, plastic presentation wallets etc. Centres are reminded that it is helpful to the moderation process when candidates present portfolio evidence using treasury tags to secure the work.

Centres are encouraged to annotate candidate portfolios where marks are being awarded, as this significantly aids the moderation process.

Activity 1

Assessment Criteria (a)

- (i) Most centres appear to have carried out the required test and candidates worked with the data. Performance with data handling differed considerably between centres. A range of different materials were used by centres.
- (ii) The graphs of stress versus strain seemed to cause most candidates few problems but there were a number who did not complete this activity. Candidates were completing calculations without the relevant SI units and by doing so, lost marks. The use of SI units is most important in engineering mathematical equations and candidates should be encouraged to use them in future examination series.
- (iii) The structure calculations were generally fine with thorough answers provided by the candidates. Again, the use of SI units was a problem with candidates not being able to access the full marks.
- (iv) Calculations for this task were well answered by the candidates answering task (iii) correctly. A small number of candidates could not perform this calculation.
- (v) SI units were a constant issue in this task and a number of candidates obtained unusually high figures for this answer.

Activity 2

Assessment Criteria (b)

Many candidates gave brief explanations of the electric hand held jigsaw in half a page, with centre assessors awarding full marks. Moderators noted that the content was not comprehensive and in enough detail to gain maximum marks.

Assessment Criteria (c)

Candidates provided some good answers describing energy transfer within the system. Block diagrams included technical detail highlighting how sub-systems and components were interconnected. A number of candidates were incorrectly awarded maximum marks by centre assessors for just providing a block diagram, with no written explanation of the construction and operation of the hand held electric jigsaw.

Assessment Criteria (d)

The majority of candidates provided details of another tool which completed a similar function to the hand held electric jigsaw. However, candidates were asked to 'provide an alternative design' which is different to providing established tools as an answer.

Activity 3

Assessment Criteria (e)

Candidates achieved the full spectrum of marks for this task. Some provided a range of diagrams and descriptions but some just provided pages of text with no diagrams. Candidates providing just text had marks did not achieve higher marks as no block diagram had been included. Quite a number of spelling and grammatical errors were identified in hand written text. This could have been reduced by the use of ICT equipment.

Assessment Criteria (f)

Only a minority of candidates achieved maximum marks for this task. The majority of candidates achieved two or three marks. Very few candidates identified specific details of health and safety or production constraints.

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