

Moderators' Report/  
Principal Moderator Feedback

Summer 2012

GCE Engineering

Unit 6934\_01

Applied Engineering Systems

## **Edexcel and BTEC Qualifications**

Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at [www.edexcel.com](http://www.edexcel.com) or [www.btec.co.uk](http://www.btec.co.uk) for our BTEC qualifications.

Alternatively, you can get in touch with us using the details on our contact us page at [www.edexcel.com/contactus](http://www.edexcel.com/contactus).

If you have any subject specific questions about this specification that require the help of a subject specialist, you can speak directly to the subject team at Pearson. Their contact details can be found on this link: [www.edexcel.com/teachingservices](http://www.edexcel.com/teachingservices).

You can also use our online Ask the Expert service at [www.edexcel.com/ask](http://www.edexcel.com/ask). You will need an Edexcel username and password to access this service.

## **Pearson: helping people progress, everywhere**

Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: [www.pearson.com/uk](http://www.pearson.com/uk)

Summer 2012

Publications Code UA031650

All the material in this publication is copyright

© Pearson Education Ltd 2012

## Unit 6934\_01

### Applied Engineering Systems

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.

## **Grade Boundaries**

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

Further copies of this publication are available from  
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467

Fax 01623 450481

Email [publication.orders@edexcel.com](mailto:publication.orders@edexcel.com)

Order Code UA031650 Summer 2012

For more information on Edexcel qualifications, please visit  
[www.edexcel.com/quals](http://www.edexcel.com/quals)

Pearson Education Limited. Registered company number 872828  
with its registered office at Edinburgh Gate, Harlow, Essex CM20 2JE

Ofqual



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

