

Moderators' Report/  
Principal Moderator Feedback

June 2011

GCE Engineering

Unit 6934\_01

Applied Engineering Systems

Edexcel is one of the leading examining and awarding bodies in the UK and throughout the world. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers.

Through a network of UK and overseas offices, Edexcel's centres receive the support they need to help them deliver their education and training programmes to learners.

For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our website at [www.edexcel.com](http://www.edexcel.com).

If you have any subject specific questions about the content of this Moderators' Report that require the help of a subject specialist, you may find our **Ask The Expert** email service helpful.

Ask The Expert can be accessed online at the following link:  
<http://www.edexcel.com/Aboutus/contact-us/>

June 2011

Publications Code UA027339

All the material in this publication is copyright

© Edexcel Ltd 2011

## Unit 6934

### Applied Engineering Systems

Overall, the candidates' performance covered the full spectrum of achievement. Some almost achieved full marks, and some marks were very low and in single figures.

#### Activity 1

##### Assessment Criteria (a)

- (i) A few centres carried out a demo of the tensile test and candidates worked with the data. Some visited other places to use their equipment. Some visited local engineering companies who have a tester. As the results of this test are then required for the following sub-tasks, they did not perform very well with them.
- (ii) The graphs of stress versus strain seemed to cause few problems, although some very weak candidates, who did not perform as level 3 candidates, struggled with this. Calculations were treated in a similar manner, many were good, but some struggled to make sense of what was required. All compared their values, but quite a few didn't really seem to know what they were comparing.
- (iii) The structure supporting a load was solved reasonably well by most candidates, but the weaker candidates had problems with it and didn't seem to know where to start. Some used software to do the analysis, which technically fits the bill with a question starting with 'determine....' and that's how it would be done at work.
- (iv) The calculations for this section were OK if the preceding section had gone well. Several left it out or guessed.
- (v) There were few problems with this section for candidates who had completed the preceding tasks.

#### Activity 2

##### Assessment Criteria (b)

The calculations were usually well done but the explanations were limited. Many omitted to mention the conversion of energy.

##### Assessment Criteria (c)

Some good answers were provided for the energy transfers, but a few just described the motor and drill again, without mentioning energy. Some block diagrams were very untidy and unsuitable to be considered as an appropriate diagram.

### **Assessment Criteria (d)**

Most candidates understood the basic principle required to change the speed of the drill. However some of the drawings and explanations were poor. One candidate showed toothed wheels driving a belt. Some candidates showed useful knowledge of circuit protection, but many ignored this altogether.

### **Activity 3**

#### **Assessment Criteria (e)**

There was a wide variation in responses for this section. Some were really good with all bullet points addressed competently. Other candidates did not attempt this section. Spelling, punctuation and grammar which are assessed in this section were generally poor and apparently not considered by some centre assessors. Although some solutions were not feasible they showed knowledge of the general principles of signals and display techniques. There was some evidence of misuse of specialist terms.

#### **Assessment Criteria (f)**

Some candidates made hard work of this by producing work that did not address the criteria and in some cases made no mention of production or safety constraints. Many candidates just made a list of components.

## **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 UA027339 June 2011

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

