

Moderators' Report/
Principal Moderator Feedback

Summer 2015

Pearson Edexcel GCE in Engineering
Unit 6932_01
The Role of the Engineer

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. 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 or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. 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

Summer 2015

Publications Code UA040781

All the material in this publication is copyright

© Pearson Education Ltd 2015

6932 Report 2015

The Role of the Engineer

Centres worked in advance of the deadline to ensure that samples were received prior to this. Most of the required documentation was provided with the sample; however, a minority of centres did not include learner authentication forms. These were contacted and reminded of the need for this important document. A range of versions of Mark Allocation Records were seen across the sample. Most centres are using the document provided for this purpose and available on the website.

Across the sample, there was good practice of clear annotation and referencing of evidence, although this was not the case for all samples. Centre assessors are encouraged to annotate in detail, to support the awarding decisions throughout the work.

Centres that were contacted regarding documentation usually responded quickly to the moderator requests and the moderation process was not over-delayed.

As in previous years, many centres have developed strong links with local companies for the focus of the investigation. Centres are reminded to keep the focus on an engineer for this unit and relate the tasks to the work the engineer does. Learners should be encouraged to investigate a current local engineer where possible, with the emphasis on both terms. The best samples came from centres with learners having work experience or a number of visits to the company. There were some samples that were based on a single visit or a visitor talk.

Assessment criterion (a)

The majority of samples demonstrated good links with local engineers. This benefitted the learners and they were able to obtain useful information to use in their reports. Learners should be encouraged not to provide background information in this section, such as the qualification and education/work history of the engineer. However, a brief context is welcome, to introduce the engineer and the product or service linked to the investigation.

Many learners provided clear evidence in MB2 here, with some justification evident to award MB3. However, there was some overgenerous awarding of marks for this section where the justification was not evident.

Assessment criterion (b)

A good range of appropriate technologies were evident in the sample. These included the technologies that the role would use, such as specialist manufacturing equipment, robotics, CAD/CAM and control systems. In addition, general communications technologies and tracking methods were also described. Learners should avoid describing general technologies, such as drilling machines; grinders etc. in this section, however, communications technologies are useful and used regularly by the engineers, so should always be included. It is worth remembering to always link the technology to the engineer and describing its use. This will then lead to the higher MB3 marks if justification for the technology is evident.

Assessment criterion (c)

In this section, both legislation and standards should be reported. Often, learners focused on standards only. Overall, a range of standards was evident, with some clear reference to the product or engineer, which was good. There was evidence of Mark band 3 work from most centres, however consequences of non-compliance was not always clear and evident in moderated work. If candidates had covered this more readily, then access to higher marking bands would have been more frequent and the marks awarded could be justified. Where a centre was judged to be generous in this section, the issues of non-compliance and how the engineer ensured the standards were met were often not clear or not considered.

Assessment criterion (d)

This section was generally covered well by the learners. There were some general Health and Safety Standards and useful links to RIDOR, PUWER and COSHH and risk assessment. Some learners included copies of some regulations and documentation. Annotation would have been useful here as some learners did not link them clearly to the engineer. As in section (c), the requirements of the higher mark band were often overlooked and marking was sometimes generous. Learners need to clearly explain how the engineer ensured that the standards were met and assessors ensure this is evident when awarding higher marks.

Assessment criterion (e)

The depth and quality of the evaluations reflected the availability or access to the engineer as a resource. Evaluations in the main were good. Some learners supported the evaluation with useful data, obtained from testing or provided by the engineer. A number of learners evaluated each section of their report, rather than evaluating the product or service. It is important to remember that in order to award the higher marks, there must be evidence of the use of some testing in the evaluation. It is also important to note that the choice of engineer and the product or service they work on can impact the evaluation greatly. Complex products can be difficult to evaluate, particularly brand leading examples or inaccessible products due to their nature or purpose.

QWC

Centres are recording and rewarding QWC for this section appropriately. There were some good supportive statements for learners, particularly at the higher mark bands. A number of centres are overlooking the QWC element and awarding higher marks when the QWC evidence is not equally matched to the mark band.

Assessment criterion (f)

A range of modifications were evident in the sample. These varied from simplistic to useful and appropriate. There were a few learners that suggested modifications linked to energy issues, such as solar power or wind turbines. In a few cases, modifications were not suggested at all, reducing the overall mark the learner could obtain. Learners should be encouraged to complete all sections in the report to gain the best possible outcome. As in (e), the engineer focus and product has an impact on this section. If the engineer works on a very complex, time proven product or system, it will be difficult to suggest modifications that are feasible and would improve the performance of the engineered product. Some learners provided useful diagrams to explain how the modification would be achieved, which should be encouraged.

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>

