



**General Certificate of Secondary Education
June 2012**

Engineering (Double Award) 48501

(Specification 4850)

Unit 1: External Assessment

Report on the Examination

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General

Question 1

A good number of the candidates could recognise the electronic component symbols on the paper. It is also quite heartening that a good number of the cohort could explain the difference between tension and compression; a fundamental principle in mechanical engineering.

Many of the candidates had given some account of how the machine head's tightening mechanism was designed to work and the associated gearing within. It is also encouraging to note that many of the group had some knowledge of forming a product design specification and the functionality of and requirements of an engineered/manufactured artefact – the guitar stand.

Question 2

This question required the cohort to explain their answers in words and diagrams/sketches. Many of the group scored some marks here, with some excellent sketches and annotations. It was quite apparent, from marking these scripts, that some research had taken place to determine the functionality of both the string attachment and the pick-up function of the guitar. Overall a well-answered question.

Question 3

Many of the candidates did not realise that the shape of the electric guitar had nothing to do with the sound output quality; as compared to its acoustic counterpart. More encouraging, were the sections on materials, production methods and finishing techniques. The vast majority of the cohort had some knowledge of each and thus scored some valuable marks through their responses.

Question 4

Drawing techniques and standards were the subject of this question. There was a very poor response here with a large percentage scoring zero marks; maybe a subject that needs a little more attention in future series.

The second section of this question was well-answered with a good percentage scoring full marks.

Question 5

Health and safety was the subject of this section. Another reasonably well-answered question with a good percentage score half-marks or better, this is quite encouraging.

Question 6

Another health and safety question centred on a standard 13 amp, three-pin plug attached to a standard household device. The answers recorded here were a little disappointing considering that the vast majority of the candidates must have seen many of these applications in real-life. It would appear that many of them have never had occasion to repair, change or inspect such a ubiquitous component; the examiners found this very puzzling.

Mark Ranges and Award of Grades

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