

7.3 ASSESSMENT EVIDENCE FOR UNIT 2: ENGINEERED PRODUCTS

<p>You need to produce evidence in your portfolio that you have made an engineered product that includes at least one process from each of the following categories: material removal; jointing and assembly; treatment processes; surface finishing. Your portfolio must include:</p> <p>a evidence of a production plan and associated quality control [9 marks];</p> <p>b a schedule for making the product, with the key features identified [7 marks];</p> <p>c identification of the production technique and critical control points [9 marks];</p> <p>d evidence of the use of ICT in the making of your product [10 marks];</p> <p>e a record of how you made your product [15 marks].</p>				
A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:	Mark	Max
<p>a1 Describe a simple engineering process, using ICT as appropriate.</p> <p style="text-align: right;">0 1 2 3</p>	<p>a2 Produce a production plan that identifies the engineering processes and quality control involved in making their product.</p> <p style="text-align: right;">4 5 6</p>	<p>a3 Evaluate their production plan, in relation to the engineering processes and quality control involved in making their product.</p> <p style="text-align: right;">7 8 9</p>		9
<p>b1 Describe the importance of accurate production planning and of meeting the product specification..</p> <p style="text-align: right;">0 1 2 3</p>	<p>b2 Identify in their production plan the schedule for making their product.</p> <p style="text-align: right;">4 5</p>	<p>b3 Evaluate their production plan in terms of how the schedule for making their product could be improved.</p> <p style="text-align: right;">6 7</p>		7
<p>c1 Identify key control points during the making of their product and describe the importance of health and safety.</p> <p style="text-align: right;">0 1 2 3 4</p>	<p>c2 Use quality control tests and carry out work, when making their product, with due regard to health and safety, including reference to appropriate safety systems.</p> <p style="text-align: right;">5 6 7</p>	<p>c3 Explain and justify how the production planning and scheduling for making their product could be improved.</p> <p style="text-align: right;">8 9</p>		9

<p>d1 Describe how they used ICT in making their product.</p> <p style="text-align: right;">0 1 2 3 4 5</p>	<p>d2 Explain why they used ICT in making their product.</p> <p style="text-align: right;">6 7 8</p>	<p>d3 Evaluate the use of ICT in making their product.</p> <p style="text-align: right;">9 10</p>		10	
<p>e1 Describe how they produced their product using appropriate tools and equipment.</p> <p style="text-align: right;">0 1 2 3 4 5 6 7</p>	<p>e2 Explain why the tools and equipment used when making their product were appropriate to the task and identify any changes they have made to their production plan.</p> <p style="text-align: right;">8 9 10 11</p>	<p>e3 Evaluate their product in terms of the tools, equipment and processes they have used in making it and comment on how these would be modified in 'real world' engineering.</p> <p style="text-align: right;">12 13 14 15</p>		15	
<p>Note: Although you will be given an interim mark out of 50 by your teacher, this mark will be moderated by OCR to make sure that it is in line with national standards. The grade (A*A* to GG) equivalent to this moderated mark will be determined at an Awarding Meeting convened for each examination series..</p>				Total	50

7.4 GUIDANCE FOR TEACHERS

7.4.1 Guidance on Delivery

Engineers must work within constraints. Therefore it is important that Centres think carefully about the product specification with which the candidate will be working. It should be designed to suit the materials, tools, equipment and other resources available to the Centre. However, it should also reflect the diverse nature of engineering and the products made by the various sectors. Centres need to write their own product specification and from this develop an appropriate production plan that the majority of candidates can follow.

Candidates must be given adequate information and training prior to using a process or piece of equipment. Often basic skills will have been taught in Key Stage 3, however for many candidates this unit will be an introduction to some of the manual operations and processes that they will further develop in their chosen field of employment.

In addition to making an engineered product, the candidate needs to develop an understanding of the reasons for selecting materials, components and processes to fulfill the design specification and achieve a quality product.

Health and safety information must be provided covering all processes, skills and knowledge that the candidate will employ whilst following this unit.

Due to the practical nature of this unit, it may be advisable in some Centres to arrange candidates in groups and run a carousel system. In this case, administration can be problematic and the use of instruction/process or job cards can prove helpful.

7.4.2 Guidance on Assessment

Coursework evidence can take a number of forms. A candidate portfolio can consist of any appropriate form of evidence, including teacher/tutor comments, photographs, taped and video evidence, supported witness statements and paper based evidence.

Where Centres are unable, for logistical reasons, to visit, or receive input from, local engineering companies, teachers/tutors should use video and simulations to give candidates a feel for industrial manufacturing processes.

When grading the portfolio for this unit you must consider the following general qualities which distinguish between grades. The candidate shows:

- increasing depth of understanding of the unit content, showing greater depth and breadth;
- increasing coherence, comparison and a greater ability to draw valid conclusions when designing;