

## PROGRESS IN ENGINEERING YEARS 10-11

Grade	Y11	Y10	Y9	Y8	Y7	AO1: Demonstrate knowledge and understanding of Engineering principles and processes	AO2: Apply knowledge, understanding and skills in different contexts, including through the use of a range of tools, equipment, materials, components and manufacturing processes	AO3: Analyse and evaluate evidence in relation to a range of Engineering contexts
9						<b>Top 20% of candidates who achieve grades 7-8</b>		
8						Thorough analysis of given problems, including consideration of various methods to solve. A wide range of alternative solutions generated. Full annotation and appropriate engineering drawings are created	Excellent modelling demonstrated included 3d, graphical and mathematical. All aspects are well explained and final outcome should function as desired. High level of skills across a number of processes, with work completed accurately.	A fully functioning, high quality prototype of the solution has been produced. Undertaken detailed and objective testing of all aspects of the product. An explanation of how quality is maintained and checked to ensure work is within tolerance.
7						Good analysis of given problems, including consideration of various methods to solve. A range of alternative solutions generated. Annotation and appropriate engineering drawings are created	Good modelling demonstrated, including 3d, graphical or mathematical. Most aspects are well explained and final outcome should function as desired. High level of skills across some processes, with work generally completed accurately.	A fully functioning, well-built prototype of the solution has been produced. Undertaken appropriate testing of most aspects of the product and provided an informative comparison to the product specification
6						Basic analysis of given problems, including consideration of various methods to solve. A limited range of alternative solutions generated. Basic annotation and mostly appropriate engineering drawings are created	Good modelling demonstrated, including 3d, graphical. Most aspects are reasonably explained and final outcome should function as desired. Good level of skills across some processes, with work generally completed accurately.	A mostly functioning, well-built prototype of the solution has been produced. Undertaken appropriate testing of most aspects of the product and provided a comparison to the product specification.
5						The problem is accurately identified with most aspects having been analysed. Consideration of other methods of solving the problem is limited to a single alternative suggestion with some detail.	Good modelling demonstrated of several aspects of development. Some drawings, records or other forms of modelling are annotated. It is clear from drawings that the majority of ideas are workable.	A functioning prototype with some non-critical flaws has been produced. Undertaken a range of basic testing using a variety of techniques, comparing product to specification. An explanation of the method used to ensure quality is maintained.
4						The problem is correctly identified with some aspects having been analysed. Consideration methods of solving the problem is limited to a	Good modelling demonstrated of many aspects of development. Some drawings, records or other forms of modelling are annotated. It is clear from drawings that	A mostly functioning prototype with some critical flaws has been produced. Undertaken some testing using more than one method, comparing product to specification. An

					single suggestion with some detail.	the ideas are mostly workable.	explanation of the quality checks is presented.
<b>3</b>					The problem is correctly identified with some aspects having been simply analysed. Consideration of methods of solving the problem is limited to a single suggestion, reasonably detailed.	Reasonable modelling demonstrated of some aspects of development. Some drawings or forms of modelling are annotated. It is clear from drawings that the ideas have workable features.	A prototype with some working features has been produced. Undertaken some basic testing, comparing product to specification. An explanation of the quality checks is presented.
<b>2</b>					The problem is broadly identified but inconclusively analysed. A single method of solving the problem is generated. Choices are stated but not followed through sufficiently to solve the problem.	Incomplete or partially effective modelling is demonstrated. An attempt at annotation of drawings has been made, but it is not clear from descriptions that the ideas are workable.	A limited analysis and evaluation of an aspect of the completed product, stating why it needs to be improved.
<b>1</b>					The problem is basically identified but inconclusively analysed. A single method of solving the problem is generated. Details are stated but not followed through sufficiently to solve the problem.	Incomplete modelling is demonstrated. Little or no annotation, the ideas are not workable.	A basic analysis of some aspect of the product is presented.