Internal Assessment Objective 4

TOTAL MARKS 12

Product Development	Level of Response		Mark Range
Candidates will need to: • as a result of investigation, testing or trialling, make reasoned decisions about: materials; production methods; pre-manufactured standard components. • consider how materials are prepared for manufacture and how pre-manufactured standard components are used;	Some materials and production methods identified. Has attempted to model part of final solution. Limited details given for final solution.	[1] [1] [1]	0-3
• by modelling, apply test procedures ensuring the product meets the original design brief and its fitness for purpose; • consider when developing the product, the implications for quantity manufacture of: (i) materials and components; (ii) tools, equipment and processes; (iii) critical dimensions and tolerances.	As a result of investigations some decisions made about materials, production methods function and pre-manufactured items. Has used modelling to check that the product meets the design brief. Some important details given about the final product and how more than one of the product could be made.	[2] [2] [2]	4-6
• develop a control system to be used in the manufacture of their product; • be flexible and adaptable in responding to changing circumstances and new opportunities; • make any necessary modifications to the chosen design; • give details of the final design including a final product specification;	Some testing and trialling resulting in decisions about materials, production methods and pre-manufactured items. Used modelling and testing to ensure that the product meets the design brief. Most details given about final product and the control system needed to produce the product in quantity.	[3] [3] [3]	7-9
• present design solutions using a range of graphic techniques and ICT including computer-aided design (CAD), to develop, model and communicate design proposals.	Appropriate testing and trialling resulting in reasoned decisions about materials, production methods and pre-manufactured items. Has used modelling and test procedures to identify any necessary modifications and to ensure the product meets the design brief. Full details about the final product and the control system needed to produce the product in quantity.	[4] [4] [4]	10-12
		Total	**12**