



FRM/EDPD/115

CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN SECONDARY EDUCATION CERTIFICATE®

MODERATOR'S COMMENTS AND RATINGS

ON SCHOOL-BASED ASSESSMENT

MECHANICAL ENGINEERING TECHNOLOGY

PROCESS AND PRODUCT EVALUATION

CENTRE NO.:

CANDIDATE NO.:

**CARIBBEAN EXAMINATIONS COUNCIL
CARIBBEAN SECONDARY EDUCATION CERTIFICATE®**

**SCHOOL-BASED ASSESSMENT
INDUSTRIAL TECHNOLOGY
OPTION B – MECHANICAL ENGINEERING TECHNOLOGY
TECHNICAL PROFICIENCY
DETAILED MARK SCHEME**

To be used by the moderator in the assessment of candidates' work

		Maximum Mark		
		KC	UK	PA
CORE				
Fundamentals of Industry				
Organization of a selected construction industry - Organizational structure clearly stated - Partial organizational structure identified	- 3 marks - 1-2 marks	03		
Organization of a selected manufacturing industry - Organizational structure clearly stated - Partial organizational structure identified	- 3 marks - 1-2 marks	03		
Set of safety rules - Five to ten safety rules for an industry or occupational area - Less than five safety rules for an industry or occupational area	- 3-4 marks - 1-2 marks	04		
Report of an accident - Detailed accident report indicating time, place and nature of accident, who was impacted and remedies employed - One to two factors are missing from the report - Very limited report with most factors missing	- 5 marks - 3-4 marks - 1-2 marks		05	
Small business plan - Business plan to include statement of purpose, description of business, services, marketing plan and how the business will be operated - Limited plan, with several elements missing	- 3- 5 marks - 1-2 marks		05	
Design Principles and Processes				
Design analysis of a simple manufactured product - Detailed analysis of product to include the six elements of design - One to two design elements are not included - Very limited use of the design elements in the product analysis	- 5 marks - 3-4 marks - 1-2 marks		05	
Information Communication Technology				
PowerPoint presentation - At least six slides presented with suitable font size and uncluttered text - Three to four slides presented with suitable font size and uncluttered text - Slides presented with a small font size and text is cluttered	- 5 marks - 3-4 marks - 1-2 marks		05	
Sub-Total		10	20	

		Maximum Mark		
		KC	UK	PA
Graphic Communication and Design Project				
Identification of the engineering need				03
- Complete description of engineering need	- 3 marks			
- Partial description of engineering need	- 1-2 marks			
Sketches/drawings of possible solutions				06
- Neat sketches/drawings are presented for two or more possible solutions	- 5-6 marks			
- Neat sketches/drawings are presented for one possible solution	- 3-4 marks			
- Sketches/drawings are presented for one possible solution, but they are incomplete and unclear	- 1-3 marks			
Incorporation of design principles – axis, symmetry, hierarchy, rhythm				06
- Five or more principles have been incorporated into the design	- 5-6 marks			
- Three to four principles have been incorporated into the design	- 3-4 marks			
- Two principles have been incorporated into the design	- 1-3 marks			
Final solution is workable				09
- Solution fully solves the problem and is workable	- 7-9 marks			
- Solution partially solves the problem	- 4-6 marks			
- Solution is weak, but partially solves the problem	- 1-3 marks			
Steps in the design process are followed				06
- Five or more design steps are incorporated into the design	- 5-6 marks			
- Three to four design steps are incorporated into the design	- 3-4 marks			
- One to two steps are incorporated into the design	- 1-3 marks			
	Sub-Total			30
Sheet Metal Project				
Pictorial Sketch				02
- Clear line work, components in good proportion, neat sketches and good layout	- 2 marks			
- Line work not clear, components out of proportion and presentation can be improved	- 1mark			
Procedure				04
- Steps of procedure are in logical order with relevant notes included	- 4 marks			
- Steps of procedure are in logical order with some relevant notes missing	- 3 marks			
- Steps of procedure are not in logical order and relevant notes are missing	- 1-2 mark			
List of Materials				03
- All materials listed by name, specifications listed with allowances for cutting and working	- 3 marks			
- All materials listed by name, specifications listed without adequate allowances for cutting and working	- 2 marks			
- Some materials listed by name with insufficient information	- 1 mark			
Layout and Construction				05
- Conforms to plans with all parts constructed to dimensions ± 0.01 mm	- 5 marks			
- Conforms to plans with some parts constructed to dimensions ± 0.5 mm	- 3 marks			
- Does not conform to plan with most parts constructed to dimensions with many deviations ± 1.00 mm	- 1 mark			
Joints				05
- Most suitable for construction of the project with good fit, precise shape	- 5 marks			
- Suitable for construction of project with good fit, minor error in shape	- 3 marks			
- Not effective in construction of project, loose fit and misshaped	- 1 mark			

		Maximum Mark		
		KC	UK	PA
Assembly				07
- Completed to plans with no deviations	- 7 marks			
- Completed with minor deviations	- 5-6 marks			
- Incomplete with minor deviations	- 3-4 marks			
- Incomplete with many deviations	- 1-2 marks			
Finish				04
- High quality finish	- 4 marks			
- Good finish	- 3 marks			
- Fairly good finish	- 2 marks			
- Poor quality finish	- 1 marks			
Sub-Total				30
Welding Project or Bench Work Project				
Pictorial Sketch				02
- Clear line work, components in good proportion, neat sketches and good layout	- 2 marks			
- Line work not clear, components out of proportion and presentation can be improved	- 1 mark			
Procedure				04
- Steps of procedure are in logical order with relevant notes included	- 4 marks			
- Steps of procedure are in logical order with some relevant notes missing	- 3 marks			
- Steps of procedure are not in logical order and relevant notes are missing	- 1-2 mark			
List of Materials				03
- All materials listed by name, specifications listed with allowances for cutting and working	- 3 marks			
- All materials listed by name, specifications listed without adequate allowances for cutting and working	- 2 marks			
- Some materials listed by name with insufficient information	- 1 mark			
Layout and Construction				05
- Conforms to plans with all parts constructed to dimensions \pm 0.01 mm	- 5 marks			
- Conforms to plans with some parts constructed to dimensions \pm 0.5 mm	- 3 marks			
- Does not conform to plan with most parts constructed to dimensions with many deviations \pm 1.00 mm	- 1 mark			
Joints				05
- Most suitable for construction of the project with good fit, precise shape	- 5 marks			
- Suitable for construction of project with good fit, minor error in shape	- 3 marks			
- Not effective in construction of project, loose fit and misshaped	- 1 mark			
Assembly				07
- Completed to plans with no deviations	- 7 marks			
- Completed with minor deviations	- 5-6 marks			
- Incomplete with minor deviations	- 3-4 marks			
- Incomplete with many deviations	- 1-2 marks			
Finish				04
- High quality finish	- 4 marks			
- Good finish	- 3 marks			
- Fairly good finish	- 2 marks			
- Poor quality finish	- 1 marks			
Sub-Total				30

		Maximum Mark		
		KC	UK	PA
Machining Project or Bench Work Project				
Pictorial Sketch				02
- Clear line work, components in good proportion, neat sketches and good layout	- 2 marks			
- Line work not clear, components out of proportion and presentation can be improved	- 1 mark			
Procedure				04
- Steps of procedure are in logical order with relevant notes included	- 4 marks			
- Steps of procedure are in logical order with some relevant notes missing	- 3 marks			
- Steps of procedure are not in logical order and relevant notes are missing	- 1-2 mark			
List of Materials				03
- All materials listed by name, specifications listed with allowances for cutting and working	- 3 marks			
- All materials listed by name, specifications listed without adequate allowances for cutting and working	- 2 marks			
- Some materials listed by name with insufficient information	- 1 mark			
Layout and Construction				05
- Conforms to plans with all parts constructed to dimensions ± 0.01 mm	- 5 marks			
- Conforms to plans with some parts constructed to dimensions ± 0.5 mm	- 3 marks			
- Does not conform to plan with most parts constructed to dimensions with many deviations ± 1.00 mm	- 1 mark			
Joints				05
- Most suitable for construction of the project with good fit, precise shape	- 5 marks			
- Suitable for construction of project with good fit, minor error in shape	- 3 marks			
- Not effective in construction of project, loose fit and misshaped	- 1 mark			
Assembly				07
- Completed to plans with no deviations	- 7 marks			
- Completed with minor deviations	- 5-6 marks			
- Incomplete with minor deviations	- 3-4 marks			
- Incomplete with many deviations	- 1-2 marks			
Finish				04
- High quality finish	- 4 marks			
- Good finish	- 3 marks			
- Fairly good finish	- 2 marks			
- Poor quality finish	- 1 marks			
Sub-Total				30
		KC	UK	PA
Profile Totals		10	20	120