



Oxford Cambridge and RSA

OCR Level 1/Level 2 Cambridge National in Engineering Programmable Systems

Qualification J824

Unit R049

Unit Recording Sheet

Please read the instructions printed at the end of this form. A Unit Recording Sheet must be completed for each candidate and unit.											
Unit Title	Developing programmable systems				Unit Code	R049	Session		Year	2	0
Scenario Title											
Centre Name							Centre Number				
Candidate Name							Candidate Number				
Marking Criteria							Teacher Comments		Mark	Page No.	
Task 1 – Topic Area 1: Plan the development of programmable systems											
MB1: 1 - 2 marks			MB2: 3 - 4 marks			MB3: 5- 6 marks					
Draws a block diagram with limited accuracy for a programmable system. [1 2]			Draws a block diagram with partial accuracy for a programmable system. [3 4]			Draws a fully accurate block diagram for a programmable system. [5 6]			/6		
MB1: 1 - 3 marks			MB2: 4 - 6 marks			MB3: 7- 9 marks					
Provides a basic justification of the hardware and software requirements to satisfy the programmable system problem. [1 2 3]			Provides an adequate justification of the hardware and software requirements to satisfy the programmable system problem. [4 5 6]			Provides a comprehensive justification of the hardware and software requirements to satisfy the programmable system problem. [7 8 9]			/9		

Marking Criteria			Teacher Comments	Mark	Page No.
Task 2 – Topic Area 2: Develop programmable systems					
MB1: 1 - 2 marks	MB2: 3 - 4 marks	MB3: 5 - 6 marks			
<p>Few appropriate connection methods selected.</p> <p>Dependent upon assistance to physically connect input and output devices to a programmable system safely.</p> <p>[1 2]</p>	<p>Some appropriate connection methods selected.</p> <p>Assisted to physically connect input and output devices to a programmable system safely.</p> <p>[3 4]</p>	<p>Fully appropriate connection methods selected.</p> <p>Works independently to physically connect input and output devices to a programmable system safely.</p> <p>[5 6]</p>		/6	
MB1: 1 - 3 marks	MB2: 4 - 6 marks	MB3: 7 - 9 marks			
<p>Produces a program that solves few aspects of the programmable system problem.</p> <p>Selects few appropriate programming functions.</p> <p>Dependent upon assistance to produce a program.</p> <p>[1 2 3]</p>	<p>Produces a program that solves some aspects of the programmable system problem.</p> <p>Selects some appropriate programming functions.</p> <p>Assisted to produce a program.</p> <p>[4 5 6]</p>	<p>Produces a program that solves all aspects of the programmable system problem.</p> <p>Selects wholly appropriate programming functions.</p> <p>Works independently to produce a program.</p> <p>[7 8 9]</p>		/9	
MB1: 1 - 4 marks	MB2: 5 - 8 marks	MB3: 9 - 12 marks			
<p>Undertakes limited simulation of the program to ensure its functionality.</p> <p>Dependent upon assistance to make any necessary corrections.</p> <p>Dependent upon assistance to safely download the program to a programmable system.</p> <p>[1 2 3 4]</p>	<p>Undertakes adequate simulation of the program to ensure its functionality.</p> <p>Assisted to make any necessary corrections.</p> <p>Assisted to safely download the program to a programmable system.</p> <p>[5 6 7 8]</p>	<p>Undertakes comprehensive simulation of the program to ensure its functionality.</p> <p>Works independently to make any necessary corrections.</p> <p>Works independently to safely download the program to a programmable system.</p> <p>[9 10 11 12]</p>		/12	

Marking Criteria			Teacher Comments	Mark	Page No.
Task 3 – Topic Area 3: Test programmable systems					
MB1: 1 - 2 marks	MB2: 3 - 4 marks	MB3: 5 - 6 marks			
Produces a basic test plan to enable functionality of the programmable system to be tested. Superficially records outcomes of testing against the test plan. [1 2]	Produces an adequate test plan to enable functionality of the programmable system to be tested. Adequately records outcomes of testing against the test plan. [3 4]	Produces a comprehensive test plan to enable functionality of the programmable system to be tested. Clearly records outcomes of testing against the test plan. [5 6]		/6	
MB1: 1 - 4 marks	MB2: 5 - 8 marks	MB3: 9 - 12 marks			
Undertakes basic visual and functional testing of the programmable system. Undertakes a basic evaluation of the programmable system based on testing. [1 2 3 4]	Undertakes adequate visual and functional testing of the programmable system, recording outcomes against the test plan. Undertakes an adequate evaluation of the programmable system based on testing. [5 6 7 8]	Undertakes comprehensive visual and functional testing of the programmable system, recording outcomes against the test plan. Undertakes a comprehensive evaluation of the programmable system based on testing. [9 10 11 12]		/12	
Total				/60	

Please tick to confirm this work has been standardised internally	<input type="checkbox"/>
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Please note: This form may be updated on an annual basis. The current version of this form will be available on the OCR website (www.ocr.org.uk).

A Centre Authentication form (CCS160) **must** be completed for each submission to the moderator. This **must** be held in your centre to be available on request at centre inspection.

Guidance on Completion of this Form

- 1 One form should be used for every candidate.
- 2 Please make sure that all parts of the form are completed.
- 3 Please enter specific page numbers where evidence can be found in the portfolio, and where possible, indicate to which part of the text in the mark band the evidence relates.
- 4 Circle/highlight the mark awarded for each strand of the marking criteria in the appropriate box.
- 5 Enter the circled/highlighted mark in the 'Mark' column.
- 6 Add the marks for the strands together to give a total out of 60. Enter this total in the relevant box.
- 7 For Paper-based submissions, one of these sheets, suitably completed, should be attached to the assessed work of each candidate.
- 8 For Electronic Internal submissions, prior to submitting 'candidate evidence' to OCR (via the Repository/SfA or via a USB), the Centre should add a separate folder containing the Unit Recording Sheets.