OCR Level 1/Level 2 Cambridge National in Engineering Programmable Systems
Qualification J824
Unit R048
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	**Making and testing electronic circuits**	**Unit Code**	**R048**	**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: Drawing and simulating electronic circuits					
MB1: 1 - 2 marks	**MB2: 3 - 4 marks**	**MB3: 5- 6 marks**			
Produces circuit schematic diagram with **limited** accuracy using CAD software. [1 2]	Produces circuit schematic diagram with **partial** accuracy using CAD software. [3 4]	Produces **fully** accurate circuit schematic diagram using CAD software. [5 6]		/6	
MB1: 1 - 2 marks	**MB2: 3 - 4 marks**	**MB3: 5- 6 marks**			
Undertakes **basic** testing of the circuit, using circuit simulation and test features of CAD software prior to PCB design, to show the circuit functions correctly. Takes **few** appropriate actions based on the outcomes of testing. [1 2]	Undertakes **adequate** testing of the circuit, using circuit simulation and test features of CAD software prior to PCB design, to show the circuit functions correctly. Takes **some** appropriate actions based on the outcomes of testing. [3 4]	Undertakes **comprehensive** testing of the circuit using circuit simulation and test features of CAD software prior to PCB design, to show the circuit functions correctly. Takes **fully** appropriate actions based on the outcomes of testing. [5 6]		/6	

R048/URS

Marking Criteria			Teacher Comments	Mark	Page No.
Task 1 (continued) – Topic Area 1: Drawing and simulating electronic circuits					
MB1: 1 - 3 marks	**MB2: 4 - 6 marks**	**MB3: 7- 9 marks**			
Uses CAD software to produce a PCB layout showing track and component views, with **limited** accuracy. [1 2 3]	Uses CAD software to produce a PCB layout showing track and component views, with **partial** accuracy. [4 5 6]	Uses CAD software to produce a PCB layout showing track and component views, that is **fully** accurate. [7 8 9]		**/9**	

Marking Criteria			Teacher Comments	Mark	Page No.
Task 2 – Topic Area 2: Constructing electronic circuits					
MB1: 1 - 3 marks	**MB2: 4 - 6 marks**	**MB3: 7 - 9 marks**			
Demonstrates **limited** skills to produce a PCB using an appropriate method. **Dependent** upon reminders of safety requirements in order to work safely. [1 2 3]	Demonstrates **adequate** skills to produce a PCB using an appropriate method. Worked safely with **some** reminders of safety requirements. [4 5 6]	Demonstrates **effective** skills to produce a PCB using an appropriate method Worked safely at **all** times without additional instruction. [7 8 9]		**/9**	
MB1: 1 - 4 marks	**MB2: 5 - 8 marks**	**MB3: 9 - 12 marks**			
Demonstrates **limited** skills to populate and assemble a PCB using appropriate tools and equipment. **Dependent** upon reminders of safety requirements in order to work safely. [1 2 3 4]	Demonstrates **adequate** skills to populate and assemble a PCB using appropriate tools and equipment. Worked safely with **some** reminders of safety requirements. [5 6 7 8]	Demonstrates **effective** skills to populate and assemble a PCB using appropriate tools and equipment Worked safely at **all** times without additional instruction. [9 10 11 12]		**/12**	

R048/URS

Marking Criteria			Teacher Comments	Mark	Page No.
Task 3 – Topic Area 3: Testing electronic circuits					
MB1: 1 - 3 marks	**MB2: 4 - 6 marks**	**MB3: 7 - 9 marks**			
Undertakes **basic** visual and functional testing of the operation of the electronic circuit. Undertakes **basic** fault identification in electronic circuits. [1 2 3]	Undertakes **adequate** visual and functional testing of the operation of the electronic circuit. Undertakes **adequate** fault identification in electronic circuits. [4 5 6]	Undertakes **comprehensive** visual and functional testing of the operation of the electronic circuit. Undertakes **comprehensive** fault identification in electronic circuits. [7 8 9]		/9	
MB1: 1 - 3 marks	**MB2: 4 - 6 marks**	**MB3: 7 - 9 marks**			
Undertakes a **basic** evaluation of final circuit construction and its operation. [1 2 3]	Undertakes an **adequate** evaluation of final circuit construction and its operation. [4 5 6]	Undertakes a **comprehensive** evaluation of final circuit construction and its operation. [7 8 9]		/9	
Total				/60	

Please tick to confirm this work has been standardised internally	

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.

R048/URS