Applied ICT

OCR GCE H715 Unit G056 Program design, production and testing

Unit Recording Sheet

Please read the instructions printed at the end of this form. **One** of these sheets, suitably completed, should be attached to the assessed work of **each** candidate.

Unit Title	17 Program design, production and testing		Unit Code	G056	Session	Jan/June	Year	2	0	0	
Centre Name						**Centre Number**					
Candidate Name						**Candidate Number**					

You will produce: a working program with complete documentation to meet a given user requirement.

Your evidence needs to include: a: [AO1/2/3] a program specification to meet the given requirement and describe how your specification meets the program requirements and how you have considered the user's needs; b: [AO1/2/3] a program design arising from your specification and an analysis of your finished design identifying its strengths and weaknesses; c: [AO1/3] an annotated modular program to realise the design, which must include at least one data structure, all data types, all control structures and all appropriate operators listed in the programming section; d: [AO1/3] test documentation including a test plan with valid, invalid and boundary data, expected results, actual results and changes identified as a result of testing; e: [AO2/4] a program review and evaluation report including an evaluation of your own performance.

Criteria			Teacher Comment	Page No.
a (i).1: You show, by identifying inputs, outputs and processing requirements for your program, that you have developed your ICT skills; **[0 1]**	**a (i).2:** you show, by correctly identifying all input, output and processing requirements for your program, that you have extended your ICT skills; **[2]**	**a (i).3:** you show, by correctly identifying all input, output and processing requirements for your program, that you have used your initiative to extend and enhance your ICT skills. **[3]**	**Mark**	
a (ii).1: You demonstrate a knowledge of tools and techniques by using correct techniques for developing your specification; **[0 1]**	**a (ii).2:** you demonstrate a detailed knowledge of tools and techniques by using correct techniques for developing your specification. **[2]**		**Mark**	
a (iii).1: You apply your knowledge and skills to solve a straightforward problem to produce a complete specification; **[0 1]**	**a (iii).2:** you apply your knowledge and skills to solve a complex problem to produce a complete and correct specification; **[2]**	**a (iii).3:** you apply your knowledge and skills to solve a complex problem to produce an effective, complete and correct specification. **[3]**	**Mark**	
b (i).1: You show by defining all processes, input screens, output formats, validation and verification, data structures and file structures, that you have extended your range of ICT skills and techniques; **[0 1]**	**b (i).2:** you show, by defining all processes, input screens, output formats, validation and verification, data structures and producing complete and well-designed screens, file structures and organisation that work, that you have extended your ICT skills; **[2]**	**b (i).3:** you show, by defining all processes, input screens, output formats, validation and verification, data structures and producing effective, complete and well-designed screens, file structure and organisation that work, that you have used your initiative to extend and enhance your IT skills. **[3]**	**Mark**	
b (ii).1: You demonstrate knowledge of techniques by using an appropriate technique, such as pseudocode, flowcharts, event-action charts, to design processes; **[0 1]**	**b (ii).2:** you demonstrate knowledge of different techniques, such as pseudocode, flowcharts, event-action charts, to design processes; **[2]**	**b (ii).3:** you demonstrate thorough, detailed knowledge of formal and informal techniques by using a structured design method and a wide range of appropriate techniques, such as pseudocode, flowcharts, event-action charts. **[3]**	**Mark**	

Criteria				Teacher Comment	Page No.
b (iii).1: You show that you can apply your knowledge by designing at least one file structure and a user interface; **[0 1]**	**b (iii).2:** you show that you can use a methodical approach to problem solving by producing a complete and accurate design covering the whole program (input, output, processes, data structure, all file structures, file organisation); **[2]**	**b (iii).3:** you show that you can use an analytical approach to produce an effective solution covering the whole program (input, output, processes, data structure, all file structures, file organisation) expressed clearly and fluently. **[3]**	**Mark**		
c (i).1: You show that you have developed your skills by producing a working program from your specification and design; **[0 1 2]**	**c (i).2:** you show that you have used your initiative to develop your skills in order to produce a working program from your specification and design; **[3 4]**	**c (i).3:** you show enhanced skills in producing a fully working program with clear and fluent annotation. **[5]**	**Mark**		
c (ii).1: You show that you can apply your knowledge and skills to a straightforward problem by producing a working program to meet original requirements; **[0 1]**	**c (ii).2:** you show that you can apply your knowledge and skills to a complex problem by producing an effective, easy to use program that meets original requirements. **[2]**		**Mark**		
d (i).1: You show that you have developed your skills by producing a complete set of testing documentation; **[0 1]**	**d (i).2:** you show that you have extended your skills by producing a test plan with valid, invalid and boundary data; **[2 3]**	**d (i).3:** you show initiative in development of skills by producing a test plan that covers all paths and user operations as well as all valid, invalid and boundary data. **[4]**	**Mark**		
d (ii).1: You show that you can apply your knowledge and skills to a straightforward problem by using a test plan and documenting test results that cover all data validation; **[0 1]**	**d (ii).2:** you show that you can use methodical and analytical approaches to a complex problem by using a test plan and documenting test results that cover all eventualities; **[2 3]**	**d (ii).3:** you show that you can use methodical and analytical approaches to a complex problem by using a test plan and documenting test results that cover all eventualities and using the results to refine the solution. **[4]**	**Mark**		
e (i).1: You demonstrate a recognition of the effects your solution will have on the end user by producing an easy-to-use program; **[0 1]**	**e (i).2:** you demonstrate a thorough understanding of the effects your solution will have on the end user by producing an easy-to-use program; **[2]**	**e (i).3:** you demonstrate a thorough understanding of the effects your solution will have on the end user by producing an easy-to-use program that makes effective use of programming constructs. **[3]**	**Mark**		
e (ii).1: You comment on the effectiveness of your solution by comparing your final program to the original requirements and identifying improvements you might make; you comment on your actions and role in solving the problem and identify areas for improvement; your report may contain errors in spelling, punctuation and grammar; **[0 1 2 3 4 5]**	**e (ii).2:** you comment on the effectiveness of your solution by identifying its strengths and weaknesses and by considering the problems found during testing – comment on how you could have reduced testing errors by changes to your design; you include an analysis on your own performance by identifying strengths and weaknesses , with some suggestions for improvement to the overall process; your report contains few spelling, punctuation and grammar errors; **[6 7 8 9 10]**	**e (ii).3:** you provide a critical analysis of your solution, taking account of user feedback to identify the strengths and weaknesses so that you can refine your solution; you include an analysis on your own performance by identifying strengths and weaknesses and use this analysis to show how you will address these issues to be more effective in the future; your report is consistently well-structured and there will be few, if any, spelling, punctuation and grammar errors **[11 12 13 14 15]**	**Mark**		

Total/50		

If this work is a re-sit, please tick		Session and Year of previous submission	Jan / June	**2**	**0**	**0**		Please tick to indicate 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 completed Centre Authentication form CCS160 **must** accompany the MS1 when it is sent to the moderator.

Guidance on Completion of this Form

1   **One** sheet should be used for each candidate.
2   Please ensure that the appropriate boxes at the top 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 the mark awarded for each strand of the marking criteria in the appropriate box and also enter the circled mark in the final column.
5   Add the marks for the strands together to give a total out of 50. Enter this total in the relevant box.

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Oxford Cambridge and RSA Examinations