MARK SCHEME for the November 2005 question paper

9691 COMPUTING

9691/02   Paper 2 (Practical Tasks), maximum raw mark 60

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.
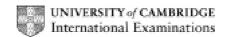
All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses

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The mark points indicated on the mark scheme are listed below. Indicate with a tick where each mark has been awarded.

*Please note that where a **Maximum Mark** is indicated, candidates cannot be awarded anything greater than that amount, even if the number of ticks against mark points exceeds the maximum.*

If the number of ticks is less than the maximum, then the number of ticks is the mark to be awarded.

Please ensure that you attach this mark sheet to each candidate's work.

		✓
Question 1(a)	*Give 1 mark for each of the following attributes, providing it has been described **and** given an appropriate data type.*	
Maximum 11 Marks		
	Author Table maximum 4 marks	
	Author ID • Appropriate data type	
	• Uniquely identifies the Author	
	Author name • Text/string type	
	• Gives name of the Author	
	Address • Text/string type	
	• Gives the address of the Author	
	Phone • Text/string type	
	• 11-digit telephone number	
	• Validation/mask for Phone	
	Book Table maximum 2 marks	
	Book ID • Text/string type	
	• Unique book identifier	
	• Validation/mask for Book ID	
	Title • Text/string type	
	• Title of the book	
	Book/Author table maximum 2 marks	
	Book ID • Text/string type	
	• Unique book identifier	
	• Validation/mask for Book ID	
	Author ID • A uniquely identifies the Author	
	• Appropriate data type	
	• 1 mark if key for Author table has been clearly specified	
	• 1 mark if key for Book table has been clearly specified	
	• 1 mark if key for BookAuthor table has been clearly specified as a composite key (both attributes)	
	Sub-Total 1(a)	

		✓
Question 1(b)(i)		
Maximum 2 Marks	• The form has a clear heading and description of its purpose	
	• There are boxes for all the attributes need to be input	
	Sub-Total 1(b)(i)	
Question 1(b)(ii)		
Maximum 2 Marks	• The form has a clear heading and description of its purpose	
	• There are boxes for all the attributes need to be input	
	Sub-Total 1(b)(ii)	
Question 1(b)(iii)		
Maximum 2 Marks	• The form has a clear heading and description of its purpose	
	• There are boxes for each attribute	
	• The values can be chosen from the list	
	Sub-Total 1(b)(iii)	
Question 1(c)		
Maximum 2 Marks	• The user is asked for a author's ID	
	• This can be chosen from a list	
	• A correct list of books is produced	
	Sub-Total 1(c)	
Question 1(d)		
Maximum 3 Marks	• There is a heading describing the purpose of the list	
	• The report has a date	
	• The page(s) are numbered	
	• All the books are listed	
	• In Book ID order	
	• All the authors for each module are listed	
	Sub-Total 1(d)	
Question 2	Give 1 mark for each sequence enclosed in parentheses and 1 mark for the output	
	NB Candidates are not expected to include the parentheses; these are for marking purposes only.	
Question 2 (i)		
Maximum 4 Marks	(1,2,) (4,5,6,7,8,9,10,11,) (27,28,30,31,32,33,34)	
	Output: Invalid string	
	Sub-Total 2(i)	
Question 2 (ii)		
Maximum 7 Marks	(1,2) (4,5,6,7,8,9,) (11,12,13,14,15,16,18,19,20,21,) (25,26,)	
	(12,13,14,15,21,22,24,25,26,) (12,26,27,28,29,30,32,33,34)	
	Output: Valid string	
	Sub-Total 2(ii)	
Question 2 (iii)		
Maximum 7 Marks	(1,2,4,5,6,7,8,9) (11,12,13,14,15,16,18,19,20,21,)	
	(25,26,12,13,14,15,) (21,22,24,25,26,12,13,14,15,16,17,18,20,21,)	
	(25,26,12,) (26,27,28,30,31,32,33,34)	
	Output: Invalid string	
	Sub-Total 2(iii)	

		✓
Question 3(a)		
Maximum 4 Marks	• User can only enter digits 0 to 7	
	• User can choose one of the four operators (+ , - , * , /)	
	• There are three boxes, two for data entry and one for output	
	• There is a clear button	
	Sub-Total 3(a)	
Question 3(b)		
Maximum 4 Marks	• The code is well annotated	
	• Meaningful names have been used throughout	
	• The function will accept an octal number (or string of octal digits)	
	• The function correctly returns the decimal equivalent	
	Sub-Total 3(b)	
Question 3(c)		
Maximum 4 Marks	• The code is well annotated	
	• Meaningful names have been used throughout	
	• The function will accept a decimal number	
	• The function correctly returns the octal equivalent	
	Sub-Total 3(c)	
Question 3(d)		
Maximum 3 Marks	• The code is well annotated	
	• Meaningful names have been used throughout	
	• There is correct code for all four functions	
	Sub-Total 3(d)	
Question 3(e)		
Maximum 5 Marks	• There is a set of test data for each operation	
	• The code correctly adds two octal numbers	
	• The code correctly subtracts two octal numbers with a positive result	
	• The code correctly subtracts two octal numbers with a negative result	
	• The code correctly multiplies two octal numbers	
	• The code correctly divides two octal numbers	
	Sub-Total 3(e)	
	Total (max 60)	