**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International Diploma Advanced Level

# MARK SCHEME for the November 2004 question paper

## CAMBRIDGE INTERNATIONAL DIPLOMA IN COMPUTING
### Module 5217     Written Paper, maximum 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.  They do 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*.

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

**November 2004**

# CAMBRIDGE INTERNATIONAL DIPLOMA

## Advanced Level

MARK SCHEME

MAXIMUM MARK: 60

SYLLABUS/COMPONENT: 5217

Practical Tasks

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International Examinations

**1 (a) (i)** Customer ID – a unique field
Numeric type
Customer name to be able to write to the person
Text/alphanumeric/string type
Street address to hold the street part of the address
Text/alphanumeric/string type
Town to hold the name of the town
Text/alphanumeric/string type
Zip code for the post code
Text/alphanumeric/string type
Telephone number
Text/alphanumeric/string type                **Maximum 8 marks**

**(ii)** Customer ID                               **Maximum 1 mark**

**(b) (i)** Component ID - a unique field
Numeric type
Description - to know the component
Text/character/string type
Unit cost - used to create bills
Currency type
Number in stock - to see if order can be filled
Integer type
Supplier ID
Numeric/text/character/string type            **Maximum 6 marks**

**(ii)** Component ID                              **Maximum 1 mark**

**(c)** Customer table has at least 20 entries
All CustomerIDs are different
Component table has at least 15 entries
Every ComponentID is different
CustComp table has at least one component for each customer
CustComp table has at least one customer for each component
There is at least one customer that has ordered more than one component
There is at least one component that has been ordered by more than one customer
All CustomerIDs in CustComp table exist in Customer table
All ComponentIDs in CustComp table exist in Component table           **Maximum 7 marks**

**(d)**    The user can only enter a valid Component ID

The report has a clear and meaningful heading

The report gives details of the Component

The report gives details of all the customers that
bought the component together with the dates    **Maximum 3 marks**

**(e)**    The user can only enter a valid Customer ID

The report has a clear and meaningful heading

The report gives details of the Customer

The report gives details of all the components that
the customer has bought together with the dates    **Maximum 3 marks**

**2**

| Top | P | S(1) | S(2) | Output |
|---|---|---|---|---|
| 1 | | 1 | | |
| | 1 | | | |
| 0 | | | | email |
| 1 | | 2 | | |
| | 3 | | | a |
| 2 | | | 7 | |
| | 0 | | | |
| | 7 | | | |
| 1 | | | | communicating |
| | 0 | | | |
| | 2 | | | |
| 0 | | | | is |
| 1 | | 4 | | |
| | 0 | | | |
| | 4 | | | |
| 0 | | | | quick |
| 1 | | 5 | | |
| | 6 | | | of |
| | 0 | | | |
| | 5 | | | |
| 0 | | | | way |
| | 0 | | | |

Give ½ mark per row, after the first two, in the table.

Round the total up to the nearest whole number

**Maximum 10 marks**

**3  (a)**  It is possible to enter any of the ten digits 0 to 9
It is possible to enter a decimal point
It is possible to enter any of the operations +. -, x, /
It is possible to enter an = sign
It is possible to clear the contents of the display and set
it to zero

There is a display for the results
It is possible to turn the calculator on/off          **Maximum 5 marks**

**(b) (i)**  *For annotation of code give:*
2 marks if it is fully annotated
1 mark for some annotation
0 marks if there is no annotation or very little


*For the code give 1 mark each to a maximum of 3:*
user can enter positive numbers
user can enter negative numbers
system accepts integer and decimal fractions
user can correctly add and subtract numbers
user can correctly multiply and divide numbers
user can clear display
result is correct when = sign is entered          **Maximum 5 marks**

**(ii)**  *Table shows testing:*
addition of two positive numbers
addition of one positive and one negative number
addition of two negative numbers
subtraction of two positive numbers
subtraction of one positive and one negative number
subtraction of two negative numbers
multiplication of two positive numbers
multiplication of one positive and one negative number
multiplication of two negative numbers
division of two positive numbers
division of one positive and one negative number
division of two negative numbers
choosing the = sign
choosing the clear operation          **Maximum 6 marks**

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**(iii)** *Give 1 mark for* each *of the following tests, providing they* show *the data entered and the result:*

addition of two positive numbers

addition of one positive and one negative number

addition of two negative numbers

subtraction of two positive numbers

subtraction of one positive and one negative number

subtraction of two negative numbers

multiplication of two positive numbers

multiplication of one positive and one negative number

multiplication of two negative numbers

division of two positive numbers

division of one positive and one negative number

division of two negative numbers

choosing the = sign

choosing the clear operation                                    **Maximum 5 Marks**


**Total (max 60)**