Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

General Certificate of Secondary Education
June 2005

INFORMATION AND COMMUNICATION TECHNOLOGY   **3527/F**
(SPECIFICATION A)(SHORT COURSE)
Foundation Tier

AQA
ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Monday 23 May 2005 1.30 pm to 3.00 pm

F

No additional materials are required.
You may use a calculator.

Time allowed: 1 hour 30 minutes

Instructions
- Use blue or black ink or ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.

Information
- The maximum mark for this paper is 80.
- Mark allocations are shown in brackets.

     3527/F

Answer **all** questions in the spaces provided.

For **Questions 1 to 6**, write the letter or letters for the answers in the spaces given.

1 What does **RAM** stand for?

A	Remote Access Memory
B	Reliable Access Memory
C	Random Access Memory
D	Replaceable Access Memory

Answer .... *(1 mark)*

2 What does **ROM** stand for?

A	Read Only Memory
B	Remote Only Memory
C	Random Only Memory
D	Reply Only Memory

Answer .... *(1 mark)*

3 Which **one** of the following best describes the process of data validation?

A	Checking of data after processing to make sure it is correct
B	Checking of data after processing to make sure it is sensible
C	Checking of data before processing to make sure it is correct
D	Checking of data before processing to make sure it is sensible

Answer .... *(1 mark)*

4 Which **two** of the following are methods of data validation?

A	Data logging
B	Linked tables
C	Police check
D	Presence check
E	Range check
F	Truancy check

Answer .... *(2 marks)*

5 Which **three** of the following are features you would expect to find in graphics software?

    A   Resizing of objects
    B   Importing images
    C   Data validation
    D   Mailmerging
    E   Insertion and deletion of fields
    F   Use of brushes

            Answers ....   *(3 marks)*

6 Which **one** of the following is **not** a common feature of Web design software?

    A   Financial modelling
    B   Hotspots to be placed over parts of pictures
    C   Hyperlinks to be created from text and graphics
    D   Text and pictures to be imported

            Answer ....   *(1 mark)*

          $\frac{\quad}{9}$

TURN OVER FOR THE NEXT QUESTION

7 (a) Each piece of hardware in the table below is either an input, output or storage device. For **each** put a tick in the correct box. As an example, an inkjet printer is an output device and so a tick is placed in the Output column.

Device	Input	Output	Storage
Inkjet printer		✓	
Digital camera			
Floppy disk drive			
Laser printer			
Mouse			
Plotter			
Scanner			
Speakers			

(7 marks)

(b) Name **one** other input device **not** given in the table above.

....

(1 mark)

(c) Name **one** other output device **not** given in the table above.

....

(1 mark)

(d) Name **one** other storage device **not** given in the table above.

....

(1 mark)

10

TURN OVER FOR THE NEXT QUESTION

8 A computer system is used to control a crane that puts boxes on to ships. A grip at the end of the crane is used to pick up and put down the boxes.

The grip is moved by typing commands into the computer system.

The commands which are used to move the grip are as follows:

RIGHT 2   Move the grip right 2 units
LEFT 3   Move the grip left 3 units
UP 4   Move the grip up 4 units
DOWN 5   Move the grip down 5 units
CLOSE   Close the grip to pick up the box
OPEN   Open the grip to release the box.

Using only commands from the list below, write down the instructions needed for the grip to pick up box A and place it on the ship's deck next to box B. The grip must then return to its original starting position.

Command List
RIGHT 14
LEFT 14
UP 4
UP 3
DOWN 3
DOWN 4
CLOSE
OPEN

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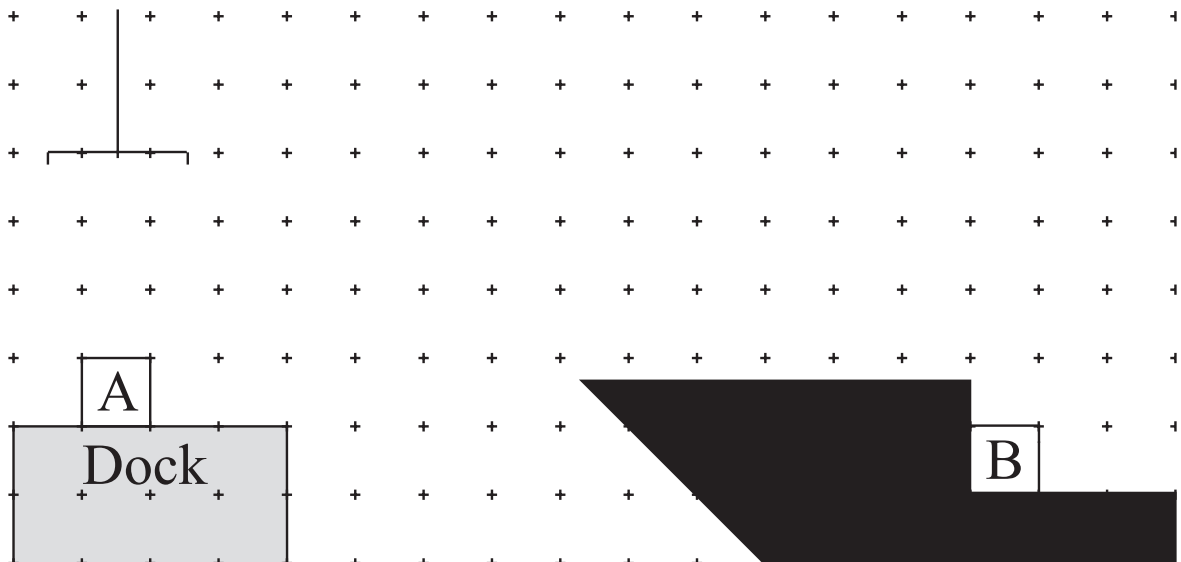
(6 marks)

6

Turn over ▶

9 A poster is needed to advertise Lancre Playgroup's summer fair. The poster has to contain the following information, which should be grouped as shown below.

General details
Lancre Playgroup Summer Fair
Date - 19th July 2005
Where - Rugby Stadium
Time - 1pm to 3pm
Ring Lancre 767676 for more details

Admission
Adults 50p
Children 25p
Children under 3 free

Stalls
Books and Comics
Cakes
Face Painting
Ice Cream
Plants
Tins and Packets
Toys

Other attractions
Fun Fair
Refreshments
Motorbike Display

    (a)   Use the space on the page opposite to design a layout for the poster. You do not need to colour in your design. *(5 marks)*

    (b)   Label your design to show where you would use each one of the following features:

        Large, bold font;
        Coloured text;
        Importing clip art. *(3 marks)*

    (c)   Annotate your design to say why you would use each feature in the way you have shown.
(3 marks)

Design your poster in the box below.
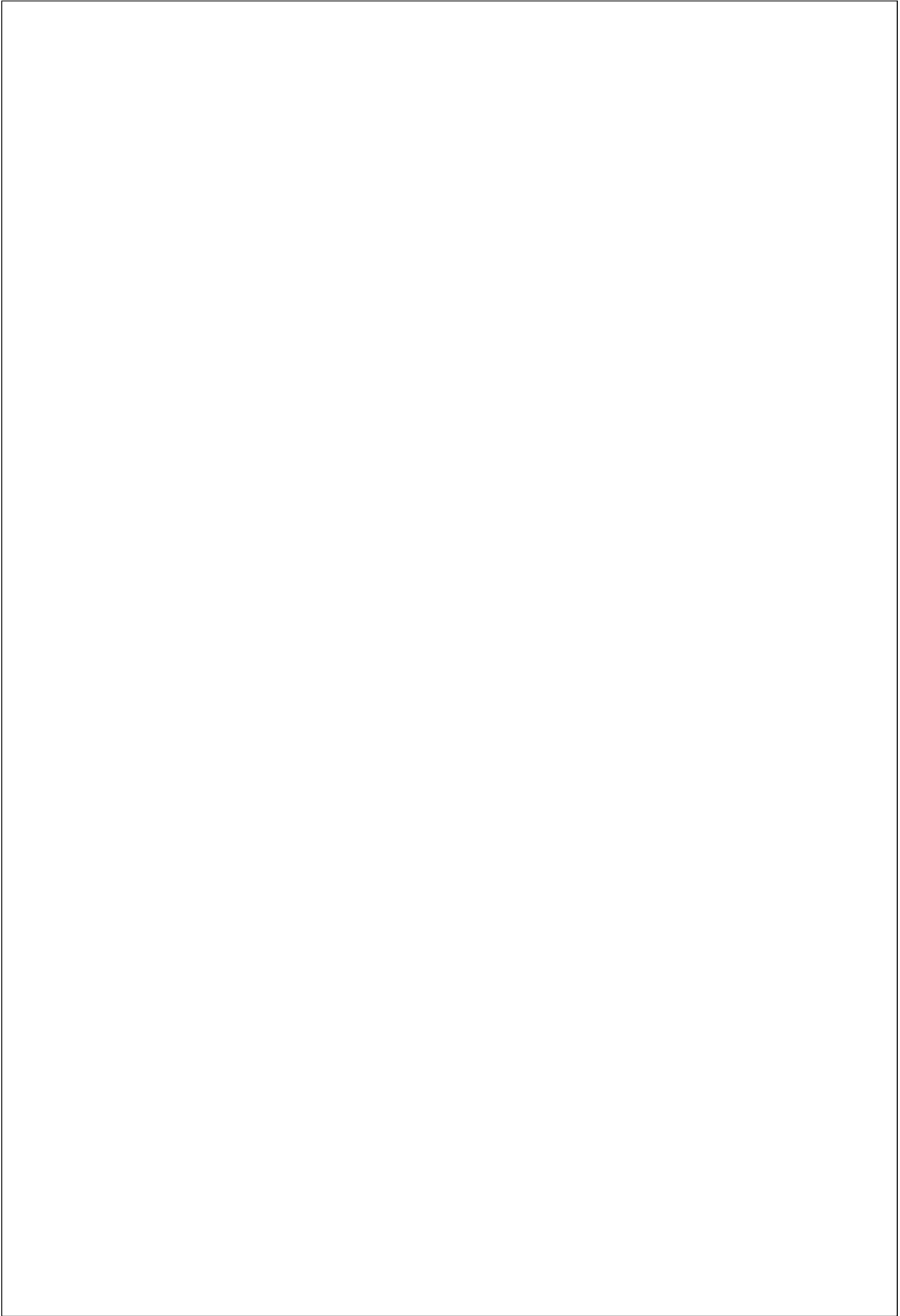
Turn over ▶

10 A school uses a spreadsheet to help calculate the profit made by its tuck shop. Part of the spreadsheet that calculates the profit made in one day is shown below.

	A	B	C	D	E	F
1	**Product name**	**Cost per item**	**Selling price per item**	**Profit per item**	**Number sold**	**Profit**
2						
3	Chocolate bar	£0.15	£0.25	£0.10	50	£5.00
4	Toffee bar	£0.10	£0.20	£0.10	40	£4.00
5	Strawberry chews	£0.05	£0.10	£0.05	60	£3.00
6	Plain crisps	£0.12	£0.25	£0.13	25	£3.25
7	Cheese crisps	£0.12	£0.25	£0.13	40	£5.20
8	Cola drink (can)	£0.15	£0.25	£0.10	60	£6.00
9	Orange squash (carton)	£0.14	£0.20	£0.06	30	£1.80
10						
11					**Total profit**	£28.25

(a) Which cell contains the selling price of one packet of plain crisps?

	Tick **one** box only
B6	
B7	
C6	
C7	

(1 mark)

(b) Some of the cells in this spreadsheet contain text, number, currency or a formula.
State which **one** of these is contained in the following cells.

(i) B3 ....

(ii) E4 ....

(iii) F4 ....

(3 marks)

(c) Tick **two** boxes to show advantages to the school of using this software package to help them work out the profit rather than using a calculator, pen and paper.

	Tick **two** boxes only
The tuck shop will make more profit	
Time can be saved by replication of formulae	
Changes are automatically re-calculated in totals	
The sweets, crisps and drinks will arrive faster	
More people will use the tuck shop	

(2 marks)

(d) Describe **one** possible disadvantage to the school of using this software package to help them work out the cost rather than using a calculator, pen and paper.

....

....

(1 mark)

7

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

11 An estate agency wants to computerise its existing filing system.
Analysis, Design, Implementation, Testing and Evaluation will all be stages in the production of their information system.
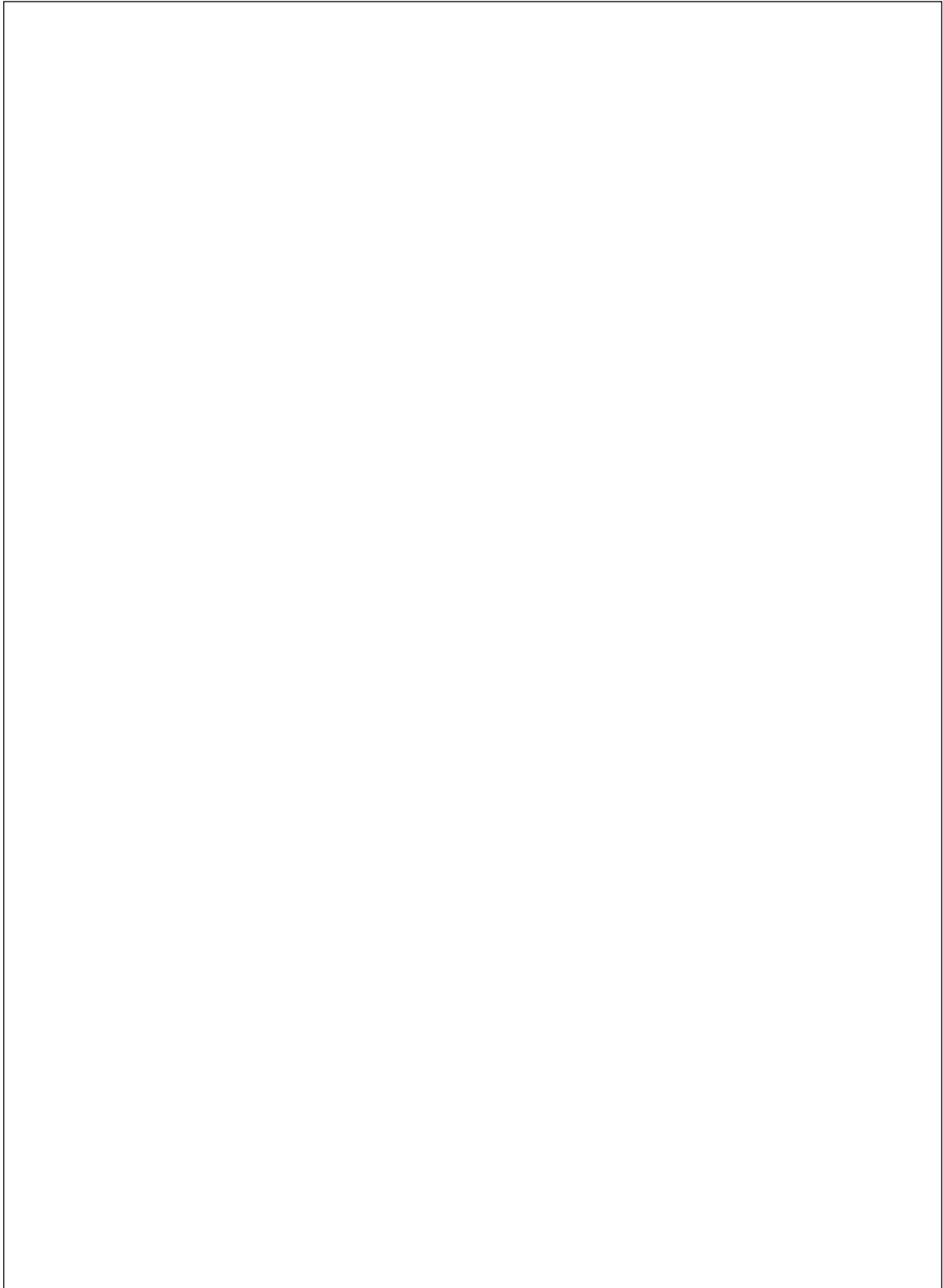
At which of these stages does each of the following take place? Some answers may be used more than once.

(i) Setting up a database of the houses for sale ....

(ii) Collecting information about how the existing system works...

(iii) Entering test data for the houses database ....

(iv) Producing a test plan for the new system ....

(v) Planning the layout of the database reports ....

(vi) Reviewing the effectiveness of the system ....

(vii) Planning how tables in the database will be linked together..

(7 marks)

7

12 In the space below design a Data Capture Form for people applying to join a gym.
Care should be taken with the layout of the form. It should include suitable fields with enough space to fill in their details.

(8 marks)

8

13 An insurance company stores personal information about its customers on a database.
As a data user, the insurance company must register under the 1998 Data Protection Act.

(a) Tick **five** boxes to show which of the following are responsibilities of the insurance company as a data user.

	Tick **five** boxes only
Information should never be given to anyone	
Information should never contain names	
Information should be accurate and up-to-date	
Information should always be changed at the request of the data subject	
Information should be kept secure	
Information should be relevant and not excessive for the purpose	
Information should never be kept longer than necessary	
Information should not be transferred outside of the European Union (E.U.)	
Information should only be given to the police	
Information should never be looked at by the insurance company's staff	

(5 marks)

(b) Give **two** rights the Data Protection Act gives to the customers.

Right 1 ....

....

Right 2 ....

....

(2 marks)

(c) Security of data is a major issue for the insurance company. Describe **two** methods that could be used to prevent unauthorised access to confidential information stored on their computer system.

Method 1 ....

....

Method 2 ....

....

(2 marks)

9

14 The definitions given below are all related to data logging and control systems. From the list given, choose the term which best matches the definition in the left-hand column of the table below. Write your answers in the spaces provided.

actuator   feedback   modem
calibrate   graphing   period of logging
data logging   logging interval sensor
encryption   multiplexer   web browser

Definition	Term which best matches the definition
An input device used to measure environmental conditions	
Collecting and storing of data at regular, fixed intervals over a period of time	
The time taken between the first reading being taken and the last reading being taken	
The time between one reading being taken and the next reading being taken	
To correlate the readings of a sensor against those of a known standard	
The modification or control of a process or system by its results or effects	

(6 marks)

6

TURN OVER FOR THE NEXT QUESTION

15 A library has been equipped with a new ICT resource centre. This has 12 multimedia PCs with fast access to the Internet.

(a) Give **two** possible advantages of using the Internet to find information rather than looking up the information in books.

Advantage 1 ....

....

Advantage 2 ....

....

(2 marks)

(b) Describe how to use a search engine to find information on the Internet.

....

....

....

....

(2 marks)

(c) Give **two** possible reasons why some library users will still look up information in books.

Reason 1 ....

....

Reason 2 ....

....

(2 marks)

(d) Give **one** resource, other than the Internet or books, that library users could use to look up information.

....

(1 mark)

7

END OF QUESTIONS