

Leave blank

SECTION A

Answer ALL questions.

For each question, choose an answer A, B, C or D and put a cross in the box. Mark only one answer for each question. If you change your mind about an answer, put a line through the box and then mark your new answer with a cross.

eg: Mark the box like this:

<input type="checkbox"/>	A
<input type="checkbox"/>	B
<input checked="" type="checkbox"/>	C <i>This shows your answer</i>
<input type="checkbox"/>	D

If you change your mind, mark the boxes like this:

<input checked="" type="checkbox"/>	A <i>This shows your final answer</i>
<input type="checkbox"/>	B
<input checked="" type="checkbox"/>	C <i>First answer</i>
<input type="checkbox"/>	D

1. Which of these is an output device?

- A keyboard
- B mouse
- C printer
- D scanner

(Total 1 mark)

Q1

2. Floppy disks and CD ROMs are both examples of

- A internal memory
- B backing storage
- C hardware
- D software

(Total 1 mark)

Q2

3. This table shows an extract from a school's database.

Pupil-ID	Surname	Forename	Tutor Group	Date of Birth
JS101	Smith	James	7P	08/09/90
JH176	Hamm	Jay	7G	06/03/89
AS151	Singh	Amaminder	7G	12/04/89
EH105	Hill	Ellie	7R	15/01/89

How many fields are shown for each record?

- A 20
- B 25
- C 4
- D 5

(Total 1 mark)

Q3



<p>4. A database is an example of</p> <ul style="list-style-type: none"> <input type="checkbox"/> A hardware <input type="checkbox"/> B software <input type="checkbox"/> C a storage device <input type="checkbox"/> D a user interface <p style="text-align: right;">(Total 1 mark)</p>	<p>Leave blank</p> <p style="text-align: center;">Q4</p> <input style="width: 20px; height: 20px;" type="text"/>
<p>5. A WAN is</p> <ul style="list-style-type: none"> <input type="checkbox"/> A computers on different sites connected using telephones / satellites <input type="checkbox"/> B computers on one site connected using telephones / satellites <input type="checkbox"/> C computers on one site connected using cabling <input type="checkbox"/> D computers on different sites connected using cabling <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q5</p> <input style="width: 20px; height: 20px;" type="text"/>
<p>6. A model is used to look at the problem of queuing in a supermarket.</p> <p>Which one of these would be an input to the model?</p> <ul style="list-style-type: none"> <input type="checkbox"/> A the number of checkouts open <input type="checkbox"/> B the number of people stacking shelves <input type="checkbox"/> C the number of items each person buys <input type="checkbox"/> D the average age of the shoppers <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q6</p> <input style="width: 20px; height: 20px;" type="text"/>
<p>7. Which one of these is a benefit of computer modelling?</p> <ul style="list-style-type: none"> <input type="checkbox"/> A the inputs can be changed to see what could happen <input type="checkbox"/> B it is cheap to run <input type="checkbox"/> C it shows what really happens <input type="checkbox"/> D it is expensive to install <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q7</p> <input style="width: 20px; height: 20px;" type="text"/>



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Ethan is using a spreadsheet to keep a track of the profit in the school tuck shop.
Use the information given to answer questions 8 and 9.

	A	B	C	D	E	F	G
1	Item	Monday	Tuesday	Wednesday	Total sold	Selling price	Takings
2	Crisps	12	13	12	37	0.26	
3	Chocolate	21	24	23	68	0.30	
4	Can of Cola	12	15	16	43	0.35	
5							

8. Ethan works out that he sold 37 packets of crisps in the three days.

What formula should he enter in cell E2 to do this automatically?

- A =Sum(B2:D2)
- B =Sum(B2*D2)
- C =(B2+D2)
- D Sum=(B2:D2)

(Total 1 mark)

Q8

9. Ethan works out the takings for crisps by multiplying Total sold by Selling price.

What formula should he enter into cell G2 to do this automatically?

- A =E2xF2
- B =E2/F2
- C =Sum(E2+F2)
- D =E2*F2

(Total 1 mark)

Q9

10. A thermistor is used to detect the heat in a green house.

A thermistor is one example of

- A a scanner
- B a modem
- C a sensor
- D an OMR

(Total 1 mark)

Q10



<p>11. A school has filtering software on their network.</p> <p>This will</p> <ul style="list-style-type: none"> <input type="checkbox"/> A stop hackers <input type="checkbox"/> B help them sort files <input type="checkbox"/> C stop pupils using some websites <input type="checkbox"/> D prevent viruses <p style="text-align: right;">(Total 1 mark)</p>	<p>Leave blank</p> <p style="text-align: center;">Q11</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
<p>12. One method of backing up data is to keep the current and two earlier versions of the same file.</p> <p>Which best describes this method?</p> <ul style="list-style-type: none"> <input type="checkbox"/> A grandfather, son, father <input type="checkbox"/> B son, grandfather, father <input type="checkbox"/> C grandfather, father, son <input type="checkbox"/> D father, son, grandfather <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q12</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
<p>13. Joanne suffers from RSI when using her computer.</p> <p>What does RSI stand for?</p> <ul style="list-style-type: none"> <input type="checkbox"/> A Repetitive Strain Illness <input type="checkbox"/> B Repetitive Sprain Infection <input type="checkbox"/> C Reduced Stress Injury <input type="checkbox"/> D Repetitive Strain Injury <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q13</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
<p>14. Identify the hardware that is necessary to connect a standard computer system to the Internet.</p> <ul style="list-style-type: none"> <input type="checkbox"/> A keyboard <input type="checkbox"/> B database <input type="checkbox"/> C modem <input type="checkbox"/> D mouse <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q14</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>



<p>15. What is the most suitable storage medium for storing an encyclopaedia?</p> <p><input type="checkbox"/> A floppy disk</p> <p><input type="checkbox"/> B spreadsheet</p> <p><input type="checkbox"/> C CD ROM</p> <p><input type="checkbox"/> D database</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Leave blank</p> <p>Q15</p> <input type="text"/>
<p>16. Which of the following is a verification method?</p> <p><input type="checkbox"/> A range check</p> <p><input type="checkbox"/> B proof reading</p> <p><input type="checkbox"/> C check digit</p> <p><input type="checkbox"/> D data logging</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q16</p> <input type="text"/>
<p>17. Two formats for graphic files are</p> <p><input type="checkbox"/> A bitmap and clip art</p> <p><input type="checkbox"/> B vector and bitmap</p> <p><input type="checkbox"/> C CAD and vector</p> <p><input type="checkbox"/> D CAD and CAM</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q17</p> <input type="text"/>
<p>18. A series of commands written to solve a problem is called</p> <p><input type="checkbox"/> A an algorithm</p> <p><input type="checkbox"/> B a decision</p> <p><input type="checkbox"/> C a process</p> <p><input type="checkbox"/> D feedback</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q18</p> <input type="text"/>



<p>19. Data entered into a computer should be as accurate as possible. One technique used is validation.</p> <p>Validation is carried out by</p> <p><input type="checkbox"/> A the software on data entry</p> <p><input type="checkbox"/> B the hardware on data entry</p> <p><input type="checkbox"/> C proof reading the data</p> <p><input type="checkbox"/> D the data entry clerk</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Leave blank</p> <p>Q19</p> <input type="text"/>
<p>20. The higher the resolution the clearer the image on the screen.</p> <p>The resolution is measured in</p> <p><input type="checkbox"/> A pixels</p> <p><input type="checkbox"/> B dpi</p> <p><input type="checkbox"/> C MHz</p> <p><input type="checkbox"/> D MB</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q20</p> <input type="text"/>
<p>TOTAL FOR SECTION A: 20 MARKS</p>	



SECTION B

Case Study Questions.

Attempt ALL questions using the spaces provided.

1. Herstham Community Theatre uses database software to store a mailing list of people who are sent the *Programme of Events* brochure.

This table shows part of the database:

Customer-ID	Date of Last Visit	Title	Initial(s)	Surname	Friend
221	02/03/04	Mr	A	Williams	Y
222	19/07/04	Miss	P K	Thomson	Y
223	25/11/04	Ms	G	Pearce	N
224	15/01/05	Mrs	T H	Rahman	N

- (a) (i) State how many records are shown in this table.

.....
(1)

- (ii) State the item of data in the **Surname** field for **Customer-ID** 222.

.....
(1)

- (b) The mailing list needs to be sorted in ascending order of surname.

State the **Customer-ID** of the customer who will be first in the sorted list, for this part of the database.

.....
(1)

- (c) The database has a key field.

- (i) Name the key field.

.....
(1)



Leave blank

(ii) Explain why this field must be the key field.

.....
.....
.....

(2)

(d) The **Friend** field is encoded.

(i) Explain the meaning of 'encoded'.

.....
.....
.....

(2)

(ii) Give **two** benefits of encoding data.

1
.....
2
.....

(2)

(Total 10 marks)

Q1

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Leave blank

2. The stock records for the theatre's bar and refreshment kiosk are held in a spreadsheet. This table shows part of the spreadsheet.

	A	B	C	D	E	F	G
1	Item	Cost price (£)	Selling price (£)	Number in stock	Re-order level	Re-order quantity	Supplier code
2	Choc-ice	0.60	1.50	267	300	2000	KL43
3	Cola (can)	0.33	0.80	476	450	3000	FG27
4	Orange (can)	0.33	0.80	425	450	3000	FG27
5	Crisps (plain)	0.27	0.72	662	600	5000	GD68

- (a) (i) State which items need reordering.

.....
(2)

- (ii) State the cell reference which gives the number of cans of orange in stock.

.....
(1)

- (iii) State the data type for the **Supplier code** column.

.....
(1)



Leave blank

(b) Every time an item is sold, the number in stock is automatically decreased by one.



(i) State the name of the input device shown in the diagram.

..... (1)

(ii) Explain how this device works.

.....
.....
..... (2)

(Total 7 marks)

Q2



Leave blank

3. (a) The theatre has a computer network. The network is in one building.

(i) Name this type of network.

.....
(1)

(ii) Give **three** advantages of a networked computer system compared to standalone systems.

1
.....
2
.....
3
.....
(3)

(b) The theatre produces a *Friends' Newsletter*. This is sent to customers as an e-mail attachment.

Describe the process of sending an e-mail with an attachment.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
(4)

(Quality of Written Communication: 3 marks)

(Total 11 marks)

Q3



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4. (a) Name the most suitable application software which can be used to produce the *Friends' Newsletter*.

.....

(1)

(b) Here is the first draft of the *Friends' Newsletter*.

Friends Newsletter May 2005

Welcome to the latest edition of the newsletter.

We have some very exciting performers appearing in the next three months and so that you can enjoy as many performances as possible we have some incredible offers for you.

Prices for first night performances have been reduced by an extra 10% for all of the shows in June. So come along and see *The Pirates of Penzance* on 13th June, *The Hoax* on 20th June and *Wonderland* on 27th June.

There have been some major changes to the theatre bar area over the last few weeks. The whole area has been completely redecorated and there is now much more seating available. In addition a much wider range of refreshments have been introduced. To celebrate the refurbishment all bar prices will be reduced by 50% for the opening nights of all shows in June.

Remember that you can visit our website to get up-to-the-minute information on all forthcoming attractions.

Adding pictures is one way of making the newsletter more appealing.

Give **two** other ways.

1

.....

2

.....

(2)



Leave
blank

(c) At the moment the newsletter is produced using a computer with a laser printer attached. The computer has a keyboard and mouse.

State **two** other input devices that would be useful for producing the newsletter.

Give a reason for each answer.

Device 1

Reason

.....

.....

Device 2

Reason

.....

.....

(4)

Q4

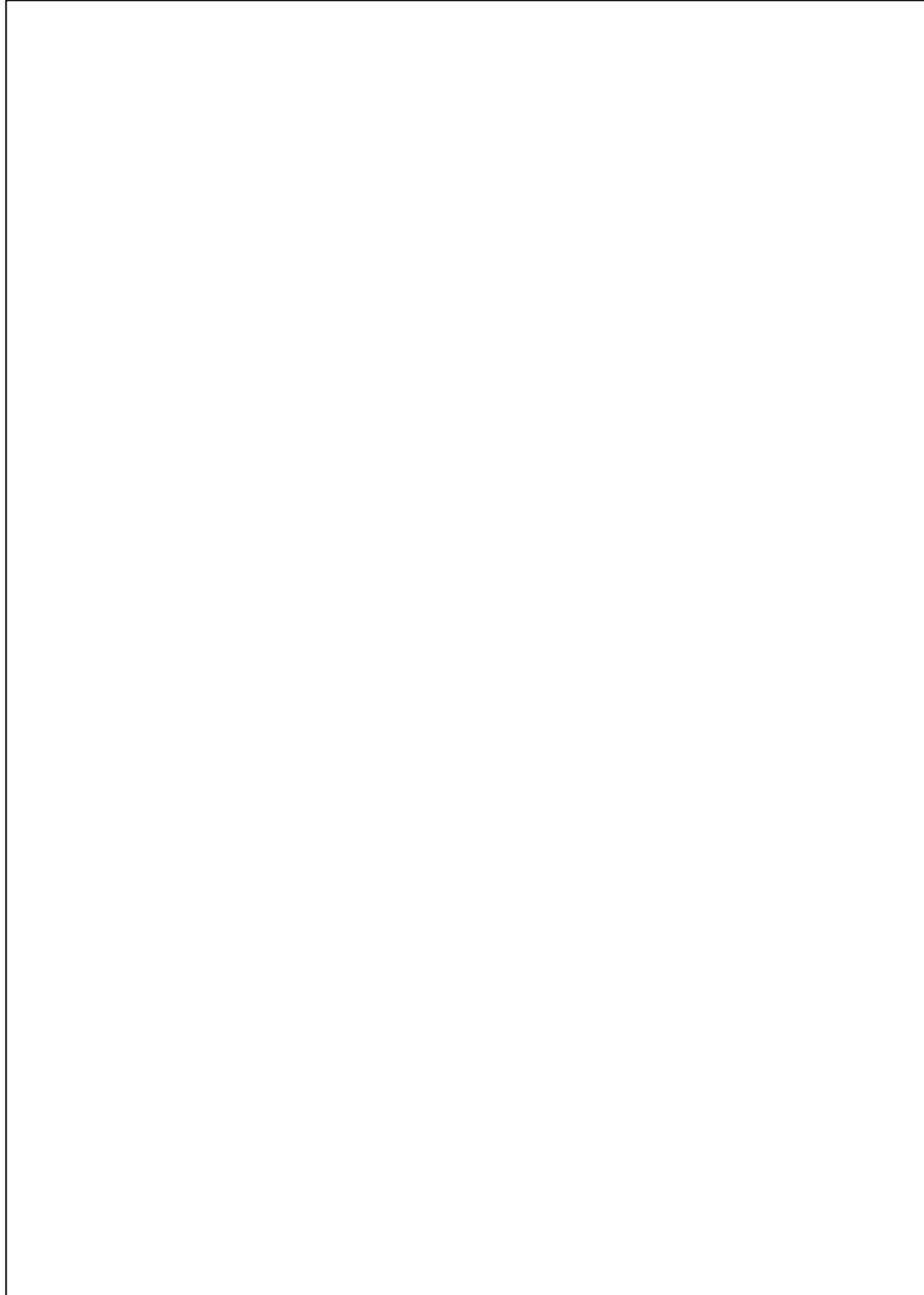
(Total 7 marks)



5. People may choose to join the 'Friends of Herstham Community Theatre' using the theatre's website.

Design a suitable data capture form.

Marks will be awarded for layout, content and ease of use.



Leave
blank

Q5

(Total 8 marks)

TOTAL FOR SECTION B: 43 MARKS

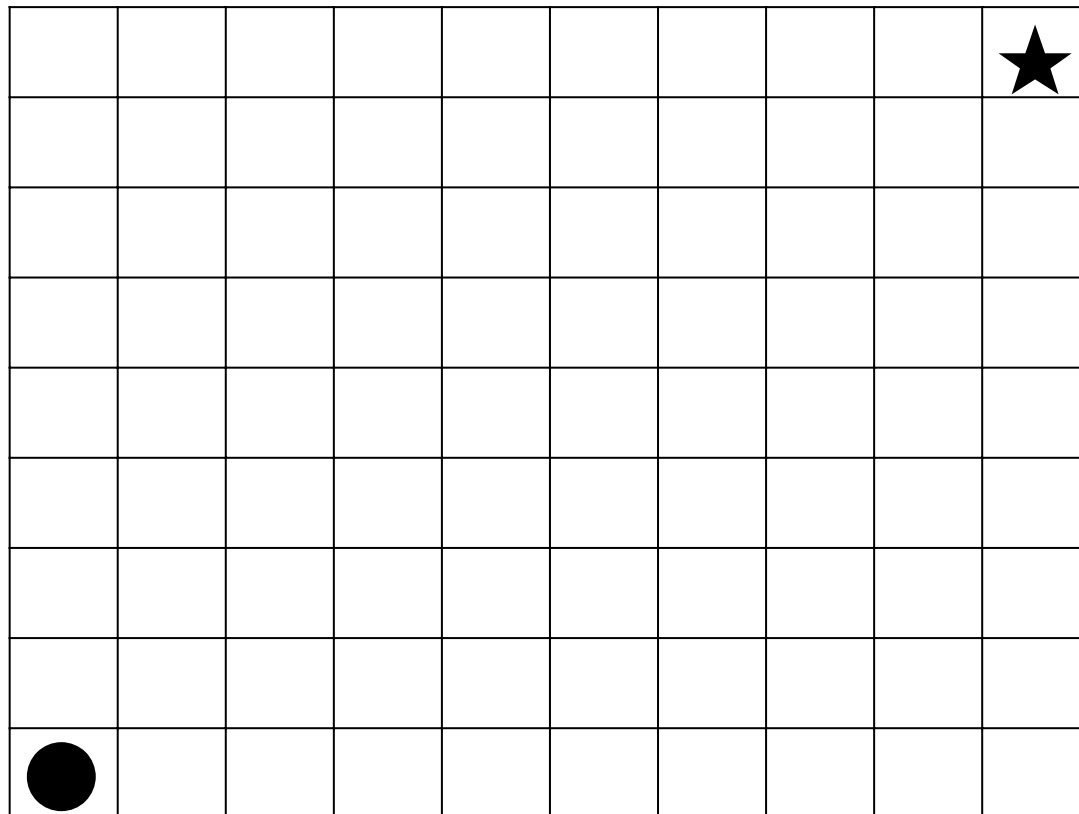


SECTION C

Attempt ALL questions using the spaces provided.

1. A school teaches logic using a drawing package. Here are some instructions to move the dot around the grid. The letter shows the direction and the number states how many squares to move.

U3 – Move up the grid 3 squares
 D2 – Move down the grid 2 squares
 L1 – Move to the left 1 square
 R4 – Move to the right 4 squares



- (a) Here is a set of instructions to make the dot move.
 Draw the path of the dot on the grid as this set of instructions is followed.
- U3, R2, U2, R3, D2, R2, D3, L7
- (b) Write the instructions to move the dot from its original position to the square containing the star.

.....

(4)
 (2)
(Total 6 marks)

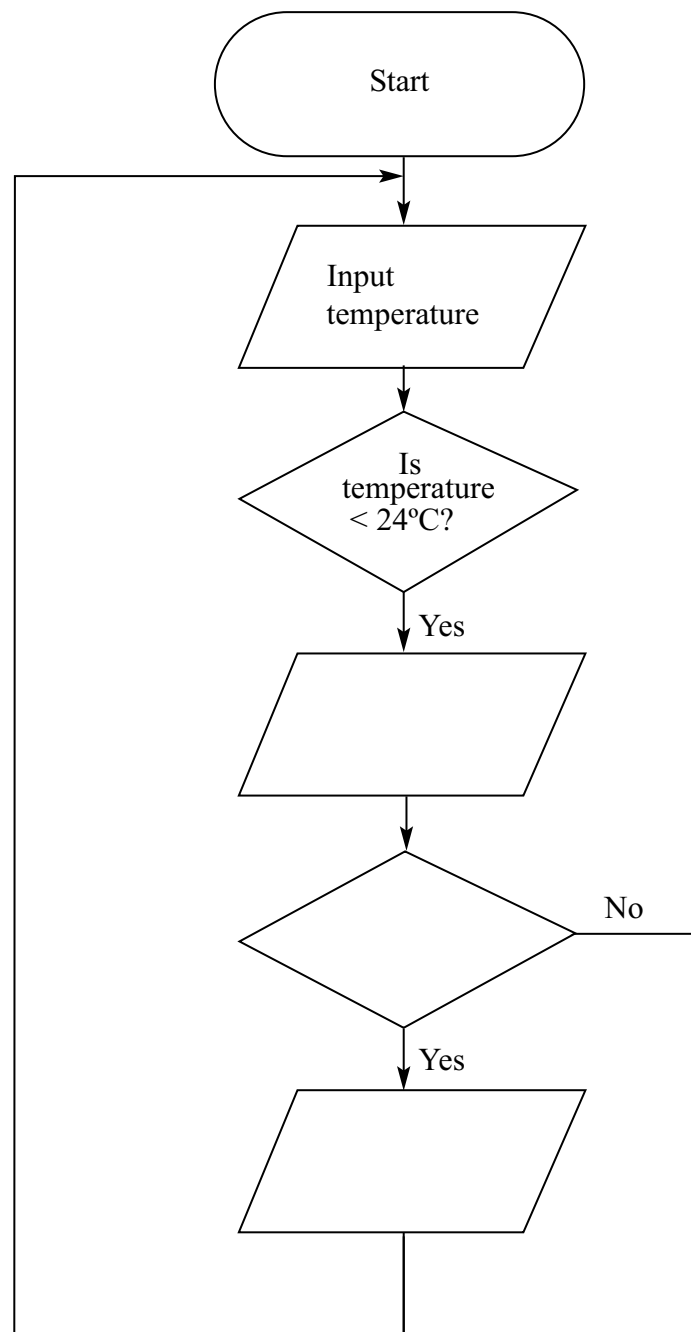
Q1



Leave blank

2. Sensors in a swimming pool are used to maintain a comfortable water temperature. The sensors detect the temperature and the temperature is input to a computer. If the temperature is less than 24°C then the water heater is turned on. If the temperature is more than 28°C then the water heater is turned off. This process is repeated continuously.

Complete the flowchart to describe this process by filling in any empty boxes and completing any connecting lines.



(Total 5 marks)

Q2



Leave
blank

3. Joe North is the manager of the Oakleaf Bank. He uses the Internet to communicate with branch managers.

(a) (i) State **two** advantages of using e-mail rather than the telephone.

1

.....

2

.....

(2)

(ii) Give **three** other methods of communication using the Internet.

1

2

3

(3)

(b) Each night Oakleaf Bank, Longford Branch, takes a copy of all the data on its system and sends it to Head Office where it is stored in a fireproof safe.

Give three reasons why they do this.

1

.....

2

.....

3

.....

(3)

(Total 8 marks)

Q3



4. Mr Khan is buying a computer for his son Peter who is 12 years old. The computer will be connected to the Internet. Mr Khan is concerned about protecting the computer against viruses and hackers.

(a) (i) State **one** way in which the computer can be protected against viruses.

.....
(1)

(ii) State **one** way in which the computer can be protected against hackers.

.....
(1)

(b) Mr Khan hopes the computer will help Peter to:

- Do his homework
- Do research for his coursework using the Internet
- Communicate with his grandmother who lives in Australia

Describe the concerns that Mr Khan may have in giving Peter access to the Internet.

.....
.....
.....
.....
.....
.....
.....
(4)

(Quality of Written Communication: 3 marks)

(c) Peter is a keen golfer. He wants to use the computer to pursue this hobby.

Describe **two** ways the Internet can help Peter do this.

1
.....
.....
2
.....
.....
(4)

(Total 13 marks)

Q4



Leave
blank

5. Simulators are often used for training, for example pilots, train drivers and motor racing drivers.

(a) (i) State **three** advantages of using a simulator to train people.

1

.....

2

.....

3

.....

(3)

(ii) Describe **one** disadvantage of using a simulator.

.....

.....

.....

(2)

(b) A simulator is one use of computer modelling.

Give **two** other applications that make use of computer modelling.

1

2

(2)

(Total 7 marks)

Q5



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6. Pupils at a secondary school are studying the weather. They want to find out the temperature, wind speed and wind direction every hour.

They have set up some data logging equipment on the roof of the science block.

(a) (i) State the input device used to detect the temperature.

.....
(1)

(ii) State **three** advantages of using data logging equipment rather than writing the temperatures down.

1
.....
2
.....
3
.....
(3)

(b) (i) State the type of software you would use to analyse the data collected.

.....
(1)

(ii) Give **two** features of the software that make it suitable for the purpose.

1
.....
2
.....
(2)

(Total 7 marks)

Q6



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7. (a) Here are some functions of a computer system. Some functions are part of the operating system and others are not.

Complete the table by writing yes or no, as appropriate.

Function	Operating System? (Yes/No)
Producing charts	
Input/Output control	
Formatting a floppy disk	
Printer management	
Virus checking	
File management	
Allocating memory	
Internet connection	

(8)

(b) Give **two** features of a graphical user interface (GUI).

1

2

(2)

(Total 10 marks)

Q7



Leave blank

8. (a) Draw a diagram to show how these components are connected in an ICT system.

Process
Input
Output
Backing Store

(3)

(b) (i) Give **one** example of an input device.

.....

(1)

(ii) Give **one** example of an output device.

.....

(1)

(iii) Give **two** examples of backing storage devices.

1

2

(2)

Q8

(Total 7 marks)

TOTAL FOR SECTION C: 63 MARKS

TOTAL FOR PAPER: 126 MARKS

END

