

Candidate Name	Centre Number	Candidate Number



**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**  
**General Certificate of Secondary Education**

**INFORMATION AND COMMUNICATION TECHNOLOGY**  
**PAPER 1 (FOUNDATION TIER)**

**2357/01**

Thursday                      **13 JANUARY 2005**                      Morning                      1 hour

Candidates answer on the question paper.  
 No additional materials are required.

**TIME**    1 hour

**INSTRUCTIONS TO CANDIDATES**

Write your name, Centre number and candidate number in the spaces at the top of this page.  
 Answer **all** the questions.  
 Write your answers, in blue or black ink, in the spaces on the question paper.

**INFORMATION FOR CANDIDATES**

The number of marks is given in brackets [ ] at the end of each question or part question.  
 No marks will be awarded for using brand names of software packages or hardware.  
 The total number of marks for this paper is **60**.

FOR EXAMINER'S USE	
1	
2	
3	
4	
5	
6	
7	
8	
<b>TOTAL</b>	

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**This question paper consists of 13 printed pages and 3 blank pages.**

Answer all questions.

- 1 Esther is a photographer. She uses the computer system below to edit her photographs.

**Image have been removed due to third party copyright restrictions**

Details:

Various images with the following items labelled:

Inkjet Printer  
2 Speakers  
CD Drive  
Microphone  
Mouse  
Scanner

- (a) Tick (✓) one box in each row to describe each item of hardware.

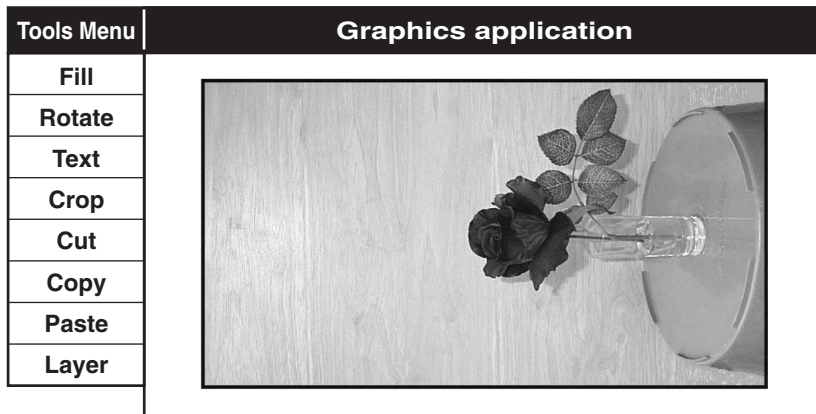
Item of hardware	Input	Storage	Output
Speakers			
Microphone			
Mouse			
CD Drive			

[4]

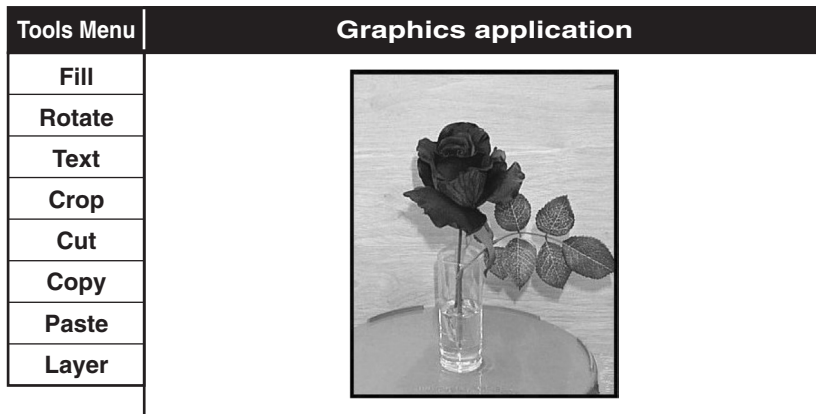
- (b) Esther wants to use a graphics package on her computer to alter a photograph.  
Which input device in her computer system could she use to import the photograph?

.....[1]

Esther imported this photograph into the graphics package on her computer.



She altered her photograph so that it looked like this.



(c) Which **two** graphics tools from the menu did she use to alter the picture?

- 1 .....
- 2 .....[2]

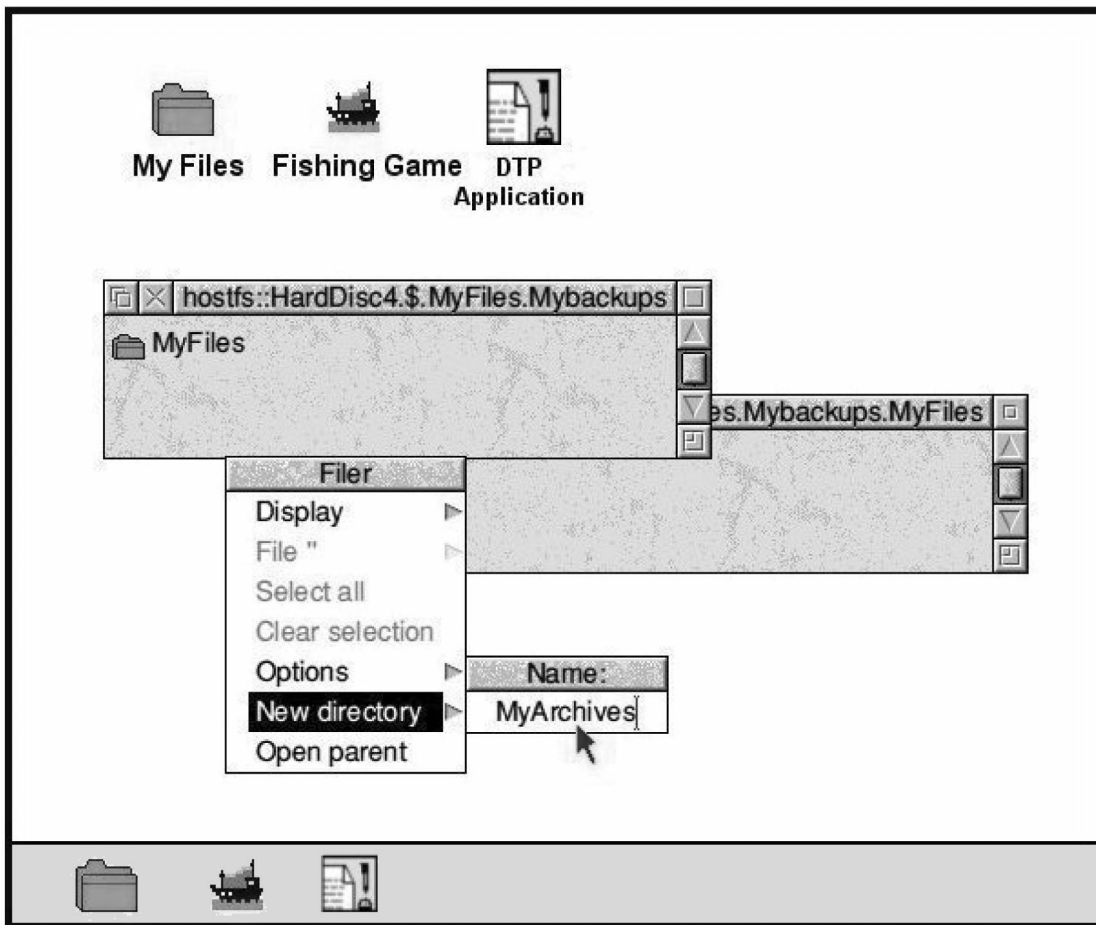
(d) Esther uses her inkjet printer to make colour copies of the photograph.  
Give **two** reasons why Esther chose this type of printer for this purpose.

- 1 .....
- 2 .....[2]

(e) When Esther first tried to print her photograph the printer did not produce a printout.  
Give **two** reasons why this might have happened.

- 1 .....
- 2 .....[2]

- 2 This is a graphical user interface (GUI) on a computer.



Identify **three** features of a GUI.

Feature 1 .....

Feature 2 .....

Feature 3 .....[3]

- 3 Here are some descriptions of different types of storage media.  
For each description, tick (✓) **one** box for the storage medium being described.

Description	RAM	Floppy Disk	CD-ROM
Data cannot be rewritten to it.			
It has the fastest access time.			
It is removable and has the smallest storage capacity.			
It loses its stored data when the power is switched off.			

[4]

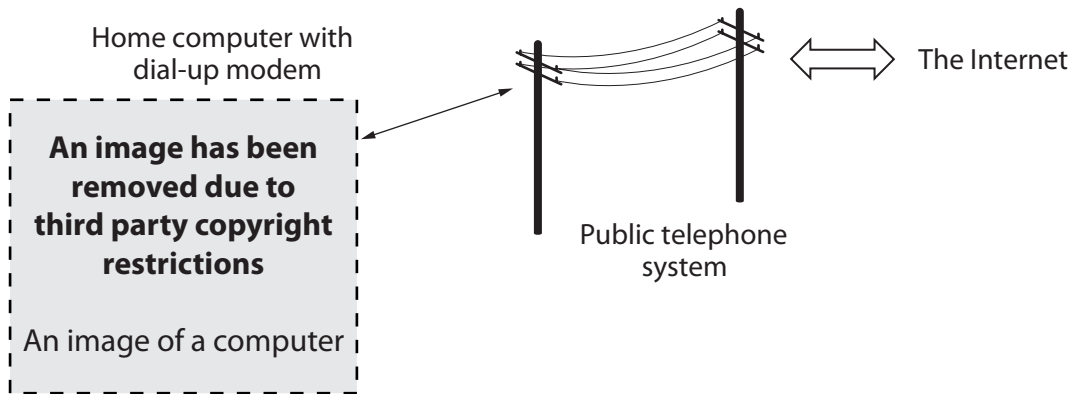
- 4 (a) What is meant by hacking?

.....[1]

- (b) Identify a problem that might be caused by hacking.

.....  
.....[1]

- 5 This computer uses a dial-up modem to connect to the Internet along the ordinary telephone lines of the public telephone system.



- (a) Explain why the modem is needed.

.....  
 .....  
 .....  
 .....[2]

- (b) When using a digital telephone line e.g. broadband connection, a dial-up modem is not needed. Why is this?

.....  
 .....[1]

- (c) Jasmine has received and read an email message.  
State two options that she now has for dealing with the email message.

Option 1 .....

Option 2 .....[2]

- (d) Jasmine wants to send a graphics file to her friend, Jake.  
Describe how she would do this by email.

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....[3]

(e) Explain why Jake might prefer to receive the graphics file by email compared to receiving it as a printed copy in the post.

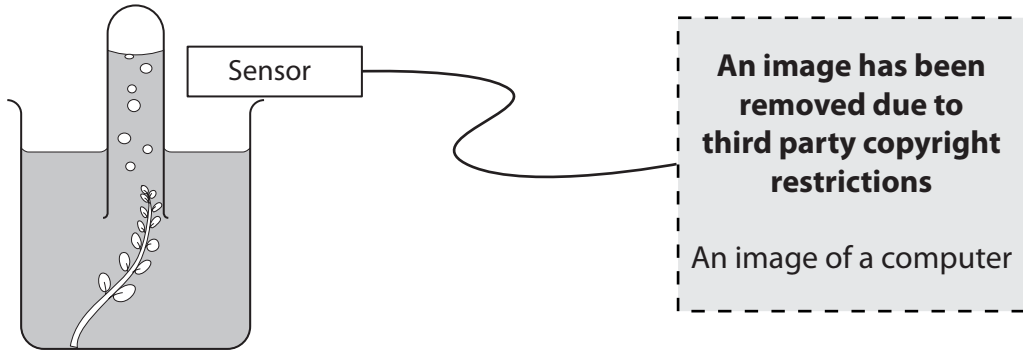
.....

.....

.....

.....[2]

- 6 Peter is using a computer in a science experiment. He leaves a sprig of pond weed in the sun for an hour. He uses the computer to record the number of bubbles given off by the pond weed.



Pond weed giving off bubbles

Computer collecting the data

- (a) Give two advantages of using a computer to record the number of bubbles instead of counting them manually.

1 .....

2 .....[2]

- (b) Peter imports the results of the count into a spreadsheet.

	A	B
1	Time interval (minutes)	Number of bubbles
2	0 – 10	0
3	10 – 20	5
4	20 – 30	10
5	30 – 40	12
6	40 – 50	13
7	50 – 60	12
8		
9	Total number of bubbles:	
10		

Which cell should Peter put a formula in to calculate the total number of bubbles?

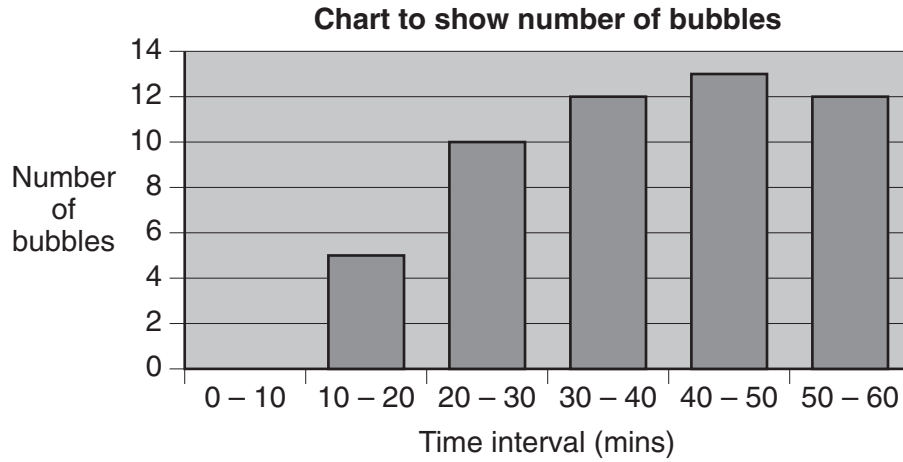
.....[1]



- (c) Write down the most suitable formula for Peter to put into the cell to calculate the total number of bubbles given off.

.....[2]

- (d) Peter makes this chart of his results.



Describe how Peter made this chart from his spreadsheet of results.

.....

.....

.....

.....

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.....

.....

.....

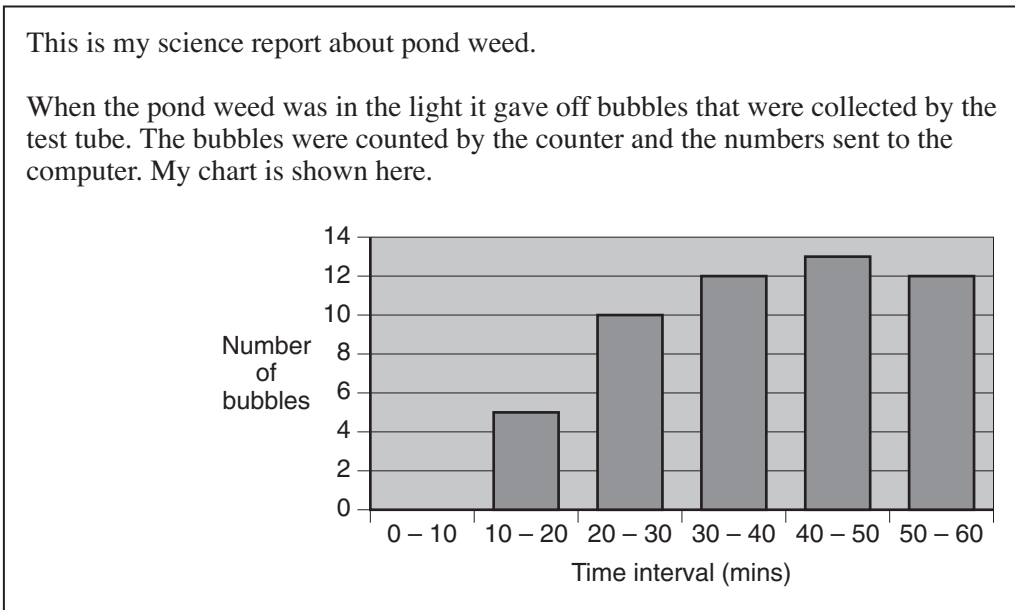
.....

.....[3]

- (e) Peter uses the chart to produce a report in a desktop publishing (DTP) package. Give **one** way that Peter could put this chart into the report.

.....[1]

(f) Peter prints out this unfinished version of the report with his graph.

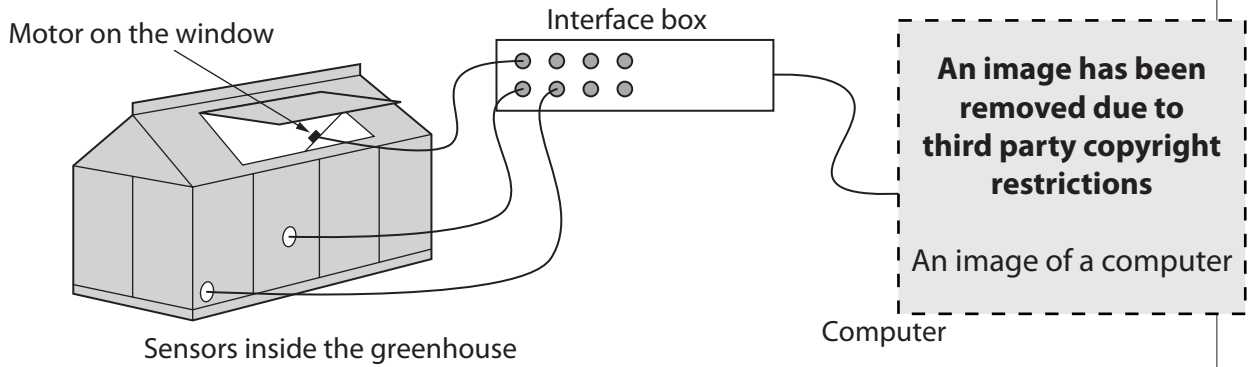


For each of the following, give **one** way in which the presentation of the report could be improved.

(i) The report title .....  
 .....[1]

(ii) The display of the chart .....  
 .....[1]

- 7 A gardener needs to make sure that the plants are kept in the right conditions for their growth. He uses sensors attached to his computer to monitor his greenhouse.



- (a) One sensor that he uses is a temperature sensor. Identify two other sensors that could be used to collect data from the greenhouse.

1 .....

2 .....[2]

- (b) The electronic data collected from the greenhouse and recorded by the computer is important. Give two ways the loss of the recorded data can be avoided.

1 .....

.....

2 .....

.....[2]

- (c) The sensors are connected to the computer via an interface box. Why is this?

.....

.....

.....

.....[2]

- 8 A school keeps a database of the names and addresses of its pupils. The table below shows part of this database.

Forename	Surname	Contact Telephone Number	Gender	Address	Date of Birth	Pupil ID Number	Stay for School Dinners
Alice	Begum		F	72a East Rd Cambridge CB7 OA1	12-6-1992	50	Yes
Alastair	Brown		M	16 North St Cambridge CB12 PO2	13-8-1993	11	Yes
Stefan	Bury		M	20 Upper Side St Cambridge CB9 AP3	11-10-1992	22	Yes
Anne-Marie	Smith		F	22 Lower West St Cambridge CB13 6AT	16-5-1993	13	Yes
Sian	Williams		F	66 Southside Cambridge CB4 7SD	12-4-1991	4	No
Darren	Martin		M	101 Hull Rd Cambridge CB1 2TY	18-3-1991	161	Yes

- (a) Give the most suitable field type for each of these fields:

Stay for School Dinners .....

Pupil ID Number .....

Address .....

Contact Telephone Number ..... [4]

- (b) It is not a good idea to store the address as shown in the table above.

- (i) Give **one** reason why it is not a good idea.

.....

- (ii) Suggest **one** improvement.

.....

.....[2]

(c) A search is performed on the database to find all the girls who stay for school dinners. Write down the search criteria to do this.

.....  
.....[3]

(d) Why is Pupil ID Number chosen for the key field in this database?

.....[1]

Each pupil has been asked to write down a contact telephone number on a form. The school secretary enters the telephone numbers into the database.

The secretary carries out verification of the data.

(e) What is meant by verification?

.....[1]

(f) Give the **two** ways in which the secretary can verify the data.

1 .....  
2 .....[2]





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