

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

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



2357/02

Tuesday **23 MAY 2006** Afternoon 1 hour 15 minutes

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

Candidate
 Name

Centre
 Number

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Candidate
 Number

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TIME 1 hour 15 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, in the spaces on the question paper.
- Do not write in the bar code. Do not write in the grey area between the pages.
- **DO NOT WRITE IN THE AREA OUTSIDE THE BOX BORDERING EACH PAGE. ANY WRITING IN THIS AREA WILL NOT BE MARKED.**

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		
Question No.	Max. Marks	Mark
1	2	
2	7	
3	4	
4	12	
5	4	
6	2	
7	6	
8	4	
9	7	
10	6	
11	6	
TOTAL	60	

This question paper consists of 8 printed pages.

Answer **all** questions.

- 1 Katherine wants to store the names, contact details and other personal information about her friends on her computer. She decides to store the details in a database.

Give **two** reasons why she uses a database.

Reason 1

.....

Reason 2

.....[2]

- 2 (a) An on-line bookseller has set up a database of customers and their details.

Tick **one** box in each row to choose the most suitable data type for each of the examples of data shown in the table.

Description of data	Example	Boolean (✓)	Text (✓)	Numeric (integer) (✓)	Numeric (real) (✓)
Telephone number	01223 2345				
Account has been paid	N				
Amount paid	£25.89				
Number of books	14				

[4]

- (b) State what is meant by these database terms.

(i) a record

.....[1]

(ii) a field

.....[1]

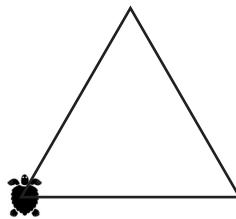
(iii) a file

.....[1]

3 A floor turtle can use the following instructions.

<i>INSTRUCTION</i>	<i>SHORT INSTRUCTION</i>	<i>MEANING</i>
REPEAT n []	REPEAT n []	Repeat the instructions in square brackets n times
FORWARD n	FD n	Move n cm forward
BACKWARD n	BK n	Move n cm backward
LEFT n	LT n	Turn left n degrees
RIGHT n	RT n	Turn right n degrees

(a) A set of instructions was given to the floor turtle and it drew this triangle with equal sides.



Complete the instructions.

RIGHT 30

..... [FORWARD 20 RIGHT 120] [2]

(b) Another set of instructions was used to create this shape.



Complete the instructions.

FORWARD 25

RIGHT 90

..... 25

RIGHT 90

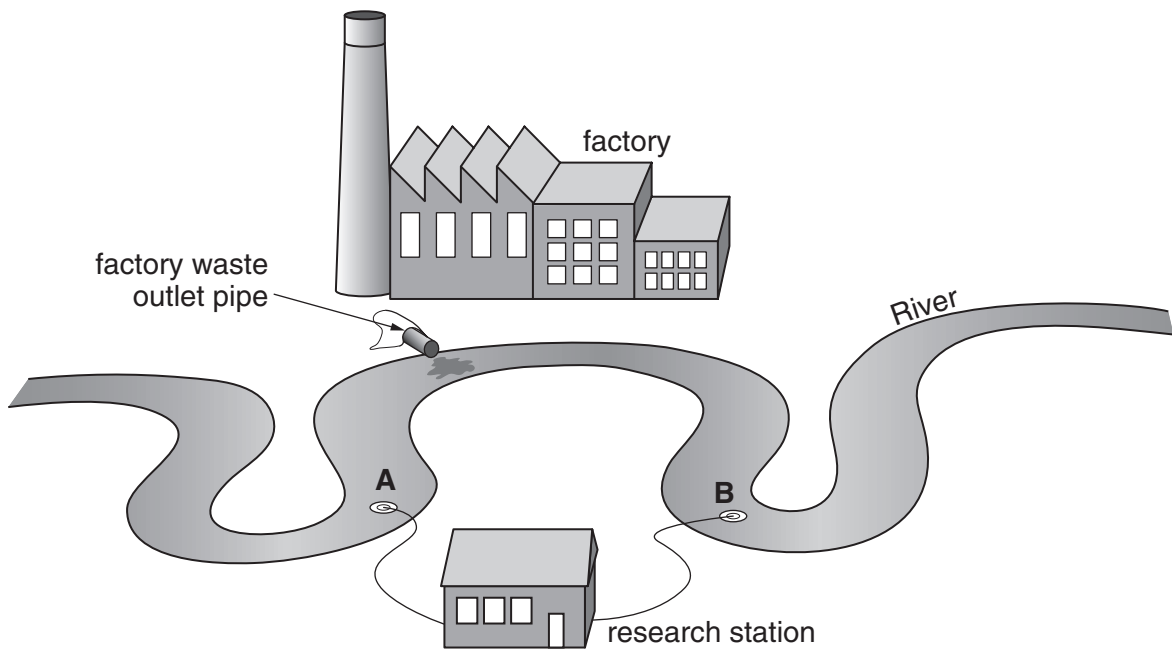
FORWARD 50

..... 90

FORWARD 100

[Turn over [2]

4 A factory discharges its waste materials into a nearby river.



A research station monitors the conditions in the river using sensors (**A** and **B**) connected to a computer.

(a) State **two** suitable sensors that could be used by the research station to monitor the river.

Sensor 1

Sensor 2[2]

(b) Explain why the river conditions are monitored using sensors and a computer rather than manually.

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.....[4]

- (c) The scientists at the research station want to analyse the data and display the results in a report.
Describe how they would do this.

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[6]

- 5 Describe ways a family could use the Internet to plan a visit to the cinema.

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[4]

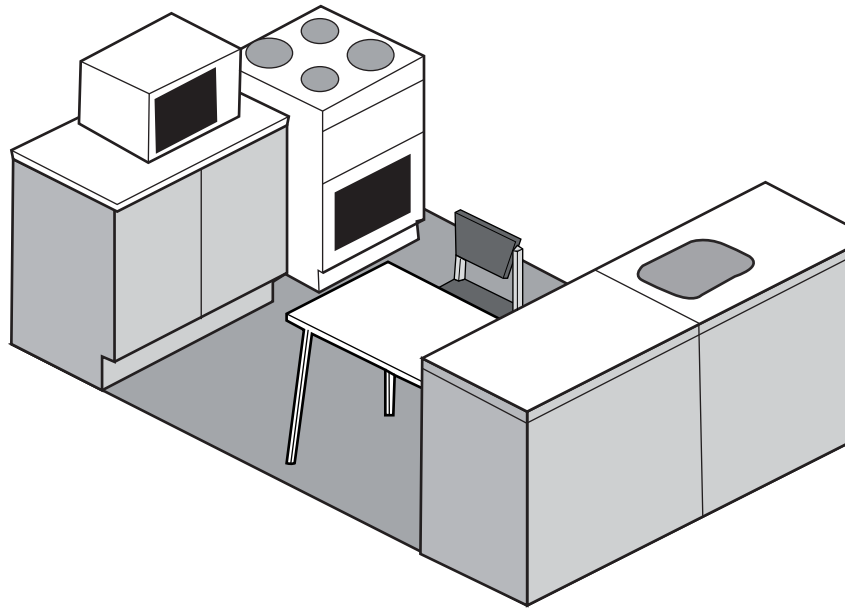
- 6 Angela is downloading music files from the Internet and using them to make CDs to sell at school.
Explain why Angela should **not** do this.

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[2]

[Turn over

7 Computer Aided Design (CAD) software was used to design the kitchen shown below.



Describe how three different features of CAD software could have been used to design this kitchen.

Feature 1

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Feature 2

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Feature 3

.....[6]

8 Katie in London sends an email to a friend in Paris.
Describe what happens when the email is sent from Katie's computer in London to her friend's computer in Paris.

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.....[4]

- 9 (a) Spreadsheets are often used to create computer models.
What is a computer model?

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.....[3]

- (b) Explain the features of spreadsheets that make them suitable for creating computer models.

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- 10 Discuss the effects of using computer-controlled robots on factory assembly lines.

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- 11 Imran is a car dealer. He needs a database of the cars he has in stock so that he can quickly find suitable cars for customers.

Describe what must be done to create this database.

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