

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
INFORMATION AND COMMUNICATION
TECHNOLOGY**

2357/02

Paper 1 (Higher Tier)

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
None

**Monday 21 June 2010
Morning**

Duration: 1 hour 15 minutes



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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INSTRUCTIONS TO CANDIDATES

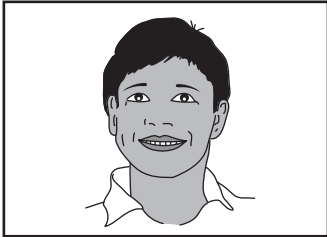
- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

INFORMATION FOR CANDIDATES


- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- No marks will be awarded for using brand names of software packages or hardware.
- This document consists of **12** pages. Any blank pages are indicated.

- 1 Roger keeps records of his class of students in a database. Part of the database is shown here as a report.

Students in my Class

<p>Forename <input style="width: 150px;" type="text" value="Devendra"/></p> <p>Family name <input style="width: 150px;" type="text" value="Chettiar"/></p> <p>Home telephone number <input style="width: 150px;" type="text" value="01632 9610966"/></p> <p>Home address</p> <p>House No. <input style="width: 150px;" type="text" value="58"/></p> <p>City <input style="width: 150px;" type="text" value="Cambridge"/></p> <p>Post Code <input style="width: 150px;" type="text" value="CB27 8QT"/></p> <p>Number of brothers/sisters <input style="width: 30px;" type="text" value="2"/></p>	<p>Student ID <input style="width: 80px;" type="text" value="902367"/></p> <p>Gender (M/F) <input style="width: 80px;" type="text" value="M"/></p> <p>Date of Birth <input style="width: 80px;" type="text" value="22-10-1995"/></p> <p>Photograph</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">  </div> <p style="text-align: center;"><i>Previous</i> ← → <i>Next</i></p>
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Students in my Class

<p>Forename <input style="width: 150px;" type="text" value="Jasmine"/></p> <p>Family name <input style="width: 150px;" type="text" value="Wang"/></p> <p>Home telephone number <input style="width: 150px;" type="text" value="01632 9610959"/></p> <p>Home address</p> <p>House No. <input style="width: 150px;" type="text" value="61a"/></p> <p>City <input style="width: 150px;" type="text" value="Cambridge"/></p> <p>Post Code <input style="width: 150px;" type="text" value="CB27 9SB"/></p> <p>Number of brothers/sisters <input style="width: 30px;" type="text" value="0"/></p>	<p>Student ID <input style="width: 80px;" type="text" value="902355"/></p> <p>Gender (M/F) <input style="width: 80px;" type="text" value="F"/></p> <p>Date of Birth <input style="width: 80px;" type="text" value="26-09-1995"/></p> <p>Photograph</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">  </div> <p style="text-align: center;"><i>Previous</i> ← → <i>Next</i></p>
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(a) Each record has a data type chosen from these available types:

- text
- real number
- integer
- date
- Boolean

Give the most suitable data type, from the list above, for each of the fields shown in the table below and state why you have chosen that data type.

The first one has been done for you.

Field	Data type	Why this type has been chosen
House No.	Text	Because house numbers could be a mixture of numbers or letters e.g. 61a
Gender (M/F)		
Home telephone number		
Number of brothers/sisters		

[6]

(b) Explain why Roger chose a database rather than a spreadsheet for storing the details of his students.

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..... [4]

(c) The Student ID field is used to identify each record in the database.

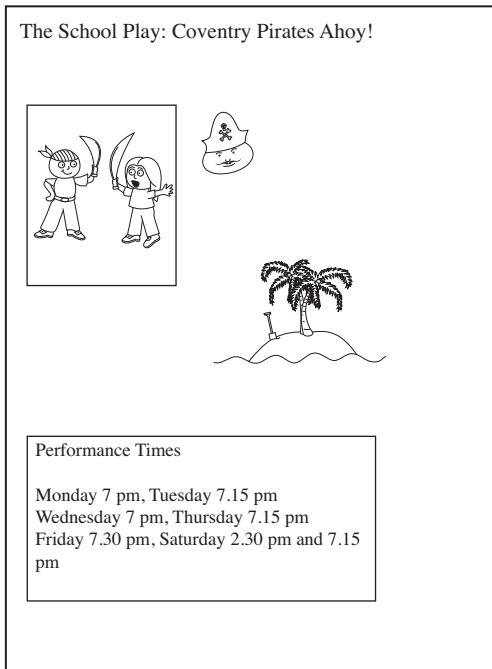
(i) Give the database term used to describe this use of a field.

..... [1]

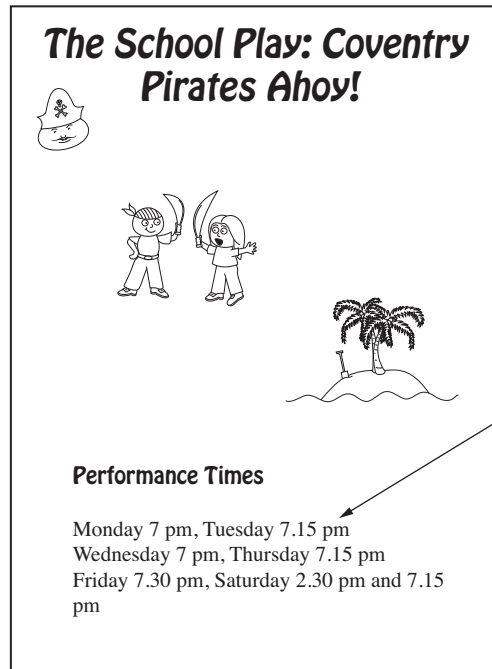
(ii) Why is this field suitable for this purpose?

..... [1]

2 These are two versions of a poster advertising a school play.



This is a draft version of the poster.



This is an improved version.

(a) Some improvements have already been made to the poster but more need to be done.

Give **two** ways in which the appearance of the list at **A** could be improved.

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..... [2]

(b) The details in the list were copied from the school newsletter.

How could the details in the list on the poster be checked for accuracy?

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..... [2]

3 A medical practice has surgeries on several sites but stores all its patients' information on the main site's computer network. Computers on other sites can connect to the network or access the information via the internet.

(a) One site still uses a dial-up connection along ordinary telephone lines to access the information stored on the main site's network.

(i) State **one** additional hardware device that this site must have to make a dial-up connection.

..... [1]

(ii) Why is this device needed when using dial-up connections?

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..... [2]

(b) Another site uses a digital broadband connection to access the internet. Why is this preferable to a dial-up connection?

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..... [4]

5 Maxwell is starting a company that will design and sell kitchens to home owners.

(a) He will have several employees who will travel around the country to visit customers.

Discuss the advantages and disadvantages of choosing laptop computers rather than desktop computers for these employees.

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[7]

(b) Maxwell uses a computer to model the finances of the new company.
What is a “computer model”?

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[3]

(c) (i) Describe how the company could make use of the internet.

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(ii) Describe the security issues that the company must consider.

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..... [8]

6 Explain why a computer system needs both main memory **and** secondary storage.

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[3]

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