GCSE (Short Course)

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 1 (Higher Tier)
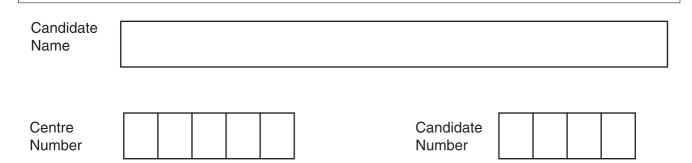
H **2357/02**

MONDAY 15 JANUARY 2007   Afternoon

Time: 1 hour 15 minutes

No additional materials are required.

Candidate Name

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

*   Write your name, Centre number and Candidate number in the boxes above.
*   Answer **all** the questions.
*   Use blue or black ink. Pencil may be used for graphs and diagrams only.
*   Read each question carefully and make sure you know what you have to do before starting your answer.
*   Do **not** write in the bar code.
*   Do **not** write outside the box bordering each page.
*   WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE 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	4	
2	9	
3	5	
4	1	
5	14	
6	6	
7	4	
8	6	
9	6	
10	5	
Total	60	

This document consists of **10** printed pages and **2** blank pages.

1 A computer manager is worried about hacking and computer viruses.

(a) What is meant by hacking?

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....[2]

(b) What is a computer virus?

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....[2]

2 Megan is creating a database about a netball team.

(a) Give a suitable data type for each of the fields shown in the table.

Write your answers in the spaces in the table.

Two have been done for you.

Field	Example data	Data type
Player ID	2342	
First name	Megan	*alphanumeric*
Date of birth	15/10/1992	
Position played	Goal defence	
Telephone number	01223 24293	
Available after school	Yes	*Boolean*

[4]

(b) (i) Which field would be most suitable as a key field?

....[1]

(ii) Why is this field suitable?

....[1]

(c) Data is validated as it is entered into her database.

What is meant by validation?

....

....[2]

(d) Give **one** validation check that could be used on the Player ID field.

....[1]

[Turn over

3 Amjid has used a word processor to write an article for the school magazine. Susan is the magazine editor and asks Amjid to send the article by email.

(a) Describe how Amjid would do this.

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....[3]

(b) Give **two** reasons why Susan would prefer to receive the article by email rather than on paper.

Reason 1 ....

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Reason 2 ....

....[2]

4 When changing a password why does a user have to type it twice?

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....[1]

5 A computer system uses sensors to monitor the water in a school swimming pool.

interface box

(a) Explain why the sensors are connected to the interface box and not directly to the computer.

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....[2]

(b) State **two** disadvantages of using a computer system to monitor the water.

Disadvantage 1...

....

Disadvantage 2...

....[2]

(c) The data from the sensors is collected and stored by the computer.
Describe how the collected data could be used.

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....[6]

[Turn over

 (d) A robot is used to clean the bottom of the pool.

 Name **two** suitable sensors that could be placed on the robot and explain how they could be used to help guide the robot around the pool.

 Sensor 1 ....

 Use ....

 ....

 Sensor 2 ....

 Use ....

 ....[4]

6 'Shopping on the Internet is a secure and convenient way to purchase goods.'

 Discuss this statement.

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 ....[6]

7 (a) Karen is developing and documenting a new ICT system.

State **two** reasons why documentation is important.

Reason 1 ....

....

Reason 2 ....

....[2]

(b) Give **two** items of evidence that Karen might produce to prove that the new system works.

Item 1..

....

Item 2..

....[2]

8 Computer Aided Design (CAD) is used to design the layout of a new computer room in a school.

Describe the advantages of using CAD for this purpose.

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....[6]

[Turn over

9 'ICT has improved the way people work.'

Discuss this statement.

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....[6]

10 A school must ensure that the data it keeps on staff and pupils is not lost. The school has to decide on a suitable storage medium for taking and keeping backups.

Discuss the advantages and disadvantages of different media available that the school could use for its backups.

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....[5]

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