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

2359/02

Paper 3 (Higher Tier)

Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:
None

**Tuesday 18 January 2011
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, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- 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).
- Answer **all** the questions.
- Do **not** write in the bar codes.

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**.
- This document consists of **8** pages. Any blank pages are indicated.

1 A book is borrowed from a school library. The librarian asks the borrower to place their thumb against a thumbprint reader connected to a computer system.

(a) Describe how the computer system uses the thumbprint data.

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 [2]

(b) Give **two** alternative methods, other than typing or using thumbprints, which would be suitable for entering the details of the borrower.

Method 1

 Method 2
 [2]

(c) Give **two** benefits of using thumbprints rather than other methods.

Benefit 1

 Benefit 2
 [2]

2 Tick whether each of the following statements about verification is true or false.

	True (✓)	False (✓)
The double entry method requires the computer to compare the different versions		
Verification checks that data is copied correctly		
Verification makes sure that data is correct		
Visual checking requires the data on the screen to be read		

[4]

3

3 A large organisation which manufactures cars on a production line uses robots to perform certain tasks.

(a) Give **three** benefits to the organisation of using robots.

- 1
- 2
- 3 [3]

(b) Give **three** drawbacks of using robots.

- 1
- 2
- 3 [3]

4 Tick whether the following statements are true of star networks or ring networks.

	Star (✓)	Ring (✓)
Each computer is directly connected to two other computers		
If one computer fails the whole network crashes		
The network uses more cabling		
There is less disruption to the network when adding another computer		

[4]

- 5 Before creating a database the file structure has to be designed. The design may include codes to be used in certain fields.
Explain why data is coded.

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..... [4]

- 6 (a) A computer system is used to control the growing conditions in a greenhouse.
Name **two** sensors that will be needed in this system.

1

2 [2]

- (b) For **one** of these sensors describe how the computer will use feedback to control the growing conditions.

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..... [4]

