OCR
RECOGNISING ACHIEVEMENT

H

2359/02

GENERAL CERTIFICATE OF SECONDARY EDUCATION

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 3 (Higher Tier)

FRIDAY 6 JUNE 2008

Morning

Time: 1 hour 15 minutes

Candidates answer on the question paper
Additional materials: No additional materials are required

Candidate
Forename

Candidate
Surname

Centre
Number

Candidate
Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.

INFORMATION FOR CANDIDATES

- The number of marks for each question 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.

FOR EXAMINER'S USE	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
TOTAL	

This document consists of **11** printed pages and **1** blank page.

1 A patient is admitted to hospital.

The hospital needs the following personal details about the patient:

first name, last name, age and home address.

(i) Why would it **not** be sensible to store the age of the patient in the database?

....

.... [1]

(ii) How can this problem be overcome?

....

.... [1]

(iii) More than one field is used for storing the home address.

Why is this useful?

....

....

....

.... [2]

2 A hospital has three sites some distance apart. It has a wide area network (WAN) that is connected between these sites.

Give **one** method of communication that could connect the network between the two sites.

....

.... [1]

3 A supermarket has a database which it uses for stock control. The database is updated as goods are sold at the checkout.

Details of some goods are entered into the database at the checkout using keyboards and keypads.

Identify **two** other devices that could be used to collect data from the goods and give **one** reason why each device would be used.

Device 1 ....

Reason ....

....

Device 2 ....

Reason ....

.... [4]

[Turn over

4 An online store has a warehouse from which it sends out goods.

(a) The database of items in the warehouse is stored on a hard disk.

State **two** reasons why the database is stored on a hard disk rather than a CD-ROM.

Reason 1 ....

....

Reason 2 ....

.... [2]

(b) The data on the hard disk is regularly archived.

What is an archive?

....

....

....

.... [2]

(c) Explain the advantages to the company of selling its goods online.

....

....

....

....

....

....

....

.... [4]

5 A company replaces its old computer system with a new system.

(a) State **two** tasks that must be done before the operators can use the new system.

Task 1 ....

....

Task 2 ....

.... [2]

(b) For six months, the company uses the old system alongside the new system.

Give **one** reason for doing this.

....

.... [1]

6 A car manufacturer uses robots to make its cars.

One advantage of using robots is that human error is eliminated.

(a) Give **two** reasons why errors might still occur.

Reason 1 ....

....

Reason 2 ....

.... [2]

(b) Give **two** advantages, other than eliminating human errors, of using robots.

Advantage 1 ....

....

Advantage 2 ....

.... [2]

[Turn over

7 The diagram shows the control feedback loop system for controlling the central heating of a house.

```
┌──────────┐        ┌──────────────┐        ┌──────────┐
│  Inputs  │ ─────▶ │  Processing  │ ─────▶ │ Outputs  │
└──────────┘        └──────────────┘        └──────────┘
     ▲                                            │
     │              ┌──────────────┐              │
     └───────────── │   Feedback   │ ◀────────────┘
                    └──────────────┘
```
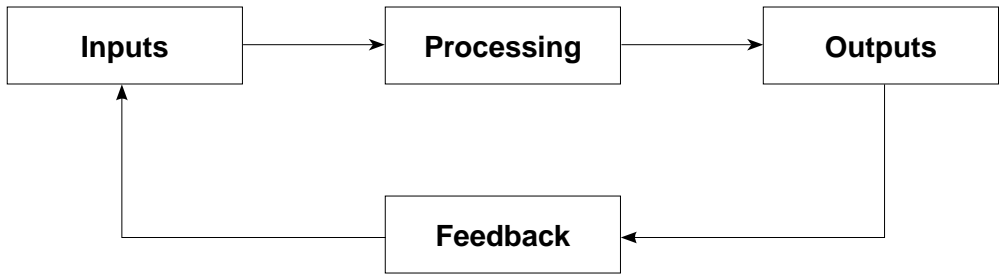
(a) Identify **two** items of data that will be input to this system.

Data item 1 ....

....

Data item 2 ....

.... [2]

(b) Identify **one** output from this system.

....

.... [1]

(c) Explain what is meant by feedback.

....

....

....

.... [2]

8 **(a)** A company employs a number of people with various disabilities to work with its computers.

Describe **two** items of special software that may be required.

1 ....

....

....

....

2 ....

....

....

.... [4]

(b) Describe **three** items of special hardware that may be required.

1 ....

....

....

....

2 ....

....

....

....

3 ....

....

....

.... [6]

[Turn over

9 A computer system uses on-line processing.

(a) Describe on-line processing.

....

....

....

.... [2]

(b) Give **one** example where on-line processing is most suitable.

....

.... [1]

10 Describe how a medical expert system provides a doctor with a diagnosis.

....

....

....

....

....

....

....

.... [4]

11 Two UK Acts of Parliament are designed to deter computer abuse.

Explain the purpose of each of the Acts shown below.

Data Protection Act (1998)

....

....

....

....

....

....

....

....

Computer Misuse Act (1990)

....

....

....

....

....

....

....

.... [6]

12 Screens are to be designed for use as input forms for a database in a library.

Discuss the main issues that must be considered when designing the screens.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

PLEASE DO NOT WRITE ON THIS PAGE