OCR
RECOGNISING ACHIEVEMENT

ADVANCED SUBSIDIARY GCE UNIT

INFORMATION AND COMMUNICATION TECHNOLOGY

Information Systems and Communications

2512

TUESDAY 22 MAY 2007

Morning

Time: 1 hour 30 minutes

Additional materials:
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.
- The total number of marks for this paper is **90** of which 4 marks are allocated to the assessment of the quality of written communication.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.
- No marks will be awarded for using brand names of software packages or hardware.

For Examiner's Use	
1	8
2	9
3	11
4	10
5	10
6	7
7	12
8	9
9	3
10	7
QWC	4
Total	90

This document consists of **16** printed pages.

Answer **all** the questions.

A travel company organises safaris to Africa.

1 The brochure produced by the travel company contains useful information.

(a) (i) Describe what is meant by the term information.

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....

....

....[2]

(ii) Describe the difference between information and knowledge?

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....[2]

(b) The travel company produces brochures about different animals that might be seen on the safari.

Describe **two** costs incurred in producing the brochures.

Cost 1 ....

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....

....

Cost 2 ....

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....[4]

2 **(a)** The travel company uses both hardware and software in its office.

Describe the difference between hardware and software, giving examples of each to illustrate the description.

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....[4]

(b) The computers are running slowly.

Identify **two** hardware upgrades and **one** software upgrade that could be carried out to improve the performance of the computers.

Hardware 1 ....

....

Hardware 2 ....

....

Software ....

....[3]

(c) Two of the output devices used by the travel company are a plotter and a projector.

Give an appropriate example of use that the travel company would make of each output device.

Plotter ....

....

....

Projector ....

....

....[2]

[Turn over

3 The travel company uses a database to hold customer details.

(a) Identify appropriate data types for the following fields in the database:

Field name	Data type
Customer ID	
Customer Postcode	
Customer Telephone Number	

[3]

(b) Validation is applied to the data being entered into the database.

(i) Identify **two** different validation methods that could be applied to a date of birth field.

Method 1 ....

....

Method 2 ....

....[2]

(ii) Describe how a check digit is used to validate the credit card number.

....

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....[2]

(c) The credit card number is taken from the customer for payment of the deposit. The number is checked to see if it is valid and the amount is deducted from the total bill. A receipt is printed and given to the customer.

Draw a diagram of the above stages showing the input, process, storage and output.

[4]

[Turn over

4 The travel company has purchased a laptop.

(a) The laptop has a Graphical User Interface (GUI).

Describe **two** other types of user interface the laptop might have.

Interface 1 ....

....

....

....

Interface 2 ....

....

....

....[4]

(b) The laptop comes with supplementary user documentation.

Apart from the user guide, identify **two** items of supplementary user documentation that would come with the laptop. For each item of supplementary user documentation identified, state its purpose.

Item 1 ....

....

Purpose ....

....

Item 2 ....

....

Purpose ....

....[4]

(c) The laptop comes with CDs that contain drivers.

What is the purpose of a driver?

....

....[1]

 (d) Once the laptop has been set up, configuration files are created.

 What is the purpose of a configuration file?

 ....

 ....[1]

[Turn over

5 The travel company stores details on its safaris, customers and bookings in a database.

(a) (i) Describe what is meant by a relational database.

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....[2]

(ii) Describe what is meant by a flat file database.

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....[2]

(b) Describe **two** advantages of using a relational database instead of a flat file database to store the data about safaris, customers and bookings.

Advantage 1 ....

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....

....

Advantage 2 ....

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....[4]

(c) Different access levels are set on the database.

Give **two** reasons why different access levels are required.

Reason 1 ....

....

Reason 2 ....

....[2]

6 The travel company is implementing a Local Area Network (LAN) in each of its four offices abroad.

(a) The travel company is setting up a star network in each office.

Draw and label a diagram of a star network.

[3]

(b) The computers in the LAN will need a protocol.

Describe the function of the protocol.

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....[2]

(c) The travel company will link its LANs together to form a Wide Area Network (WAN).

Identify **two** features of a WAN.

Feature 1 ....

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Feature 2 ....

....[2]

[Turn over

7 The travel company receives regular reports about the safaris from its tour guides in Africa.

(a) The tour guides can make their reports using email or video conferencing.

Compare email and video conferencing for reporting about the safaris.

Comparison 1 ....

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Comparison 2 ....

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Comparison 3 ....

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....[6]

(b) The tour guides often send faxes to the travel company in the UK.

Describe **three** facilities of fax that the tour guide could use.

Facility 1 ....

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Facility 2 ....

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Facility 3 ....

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....[6]

[Please turn over for question 8]

[Turn over

8 Two of the Acts that the travel company must comply with are the Computer Misuse Act 1990 (CMA) and the Data Protection Act 1998 (DPA).

(a) Identify the **three** crimes described by the CMA.

Crime 1 ....

....

Crime 2 ....

....

Crime 3 ....

....[3]

(b) (i) Identify **four** of the principles of the DPA.

Principle 1 ....

....

....

Principle 2 ....

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Principle 3 ....

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Principle 4 ....

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....[4]

(ii) Identify **two** of the legal rights that customers of the travel company have under the DPA.

Right 1 ....

....

Right 2 ....

....[2]

9 The network manager for the travel company has joined the British Computer Society (BCS).

Identify **three** services that the BCS can provide for the network manager.

Service 1 ....

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Service 2 ....

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Service 3 ....

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....[3]

[Please turn over for question 10]

[Turn over

10 Discuss the impact that portable technology has had on individuals who are on holiday abroad.

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Quality of Written Communication [4]

[Total: 90]

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