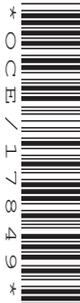**OCR**
RECOGNISING ACHIEVEMENT

ADVANCED SUBSIDIARY GCE

INFORMATION AND COMMUNICATION TECHNOLOGY **G061**
Information, Systems and Applications

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
None

Tuesday 18 May 2010
Afternoon

Duration: 2 hours

G061

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

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 **120**, of which marks are allocated to the assessment of 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.
* This document consists of **20** pages. Any blank pages are indicated.

A software company creates on-line training packages for a number of different customers.

1 (a) Define the term data.

....

....

....

.... **[2]**

(b) Text and images are two representation methods the company could use when it creates an on-line training package.

Identify **two** other different representation methods the company could use in the on-line training package and give an advantage of each.

Method 1 ....

....

Advantage ....

....

Method 2 ....

....

Advantage ....

.... **[4]**

2 The company produces a CD-ROM which it sends to prospective customers detailing the services that it provides.

(a) The CD-ROM contains static data.

Describe the difference between static and dynamic data.

....

....

....

.... **[2]**

(b) Give **two** disadvantages of using static data for the CD-ROM.

Disadvantage 1 ....

....

Disadvantage 2 ....

.... **[2]**

Turn over

4

The company has created an order database to store customer orders.

3 Draw a diagram to show the input, process, storage and output of the following stages:

- Customer sends the company an order by email.
- The order information is automatically extracted from the email and saved into the company's order database.
- If the order is accepted an invoice is created and sent to the customer.
- If the order is not accepted, a refusal letter is generated and sent to the customer.

[4]

4 Before the order information is saved into the company's order database, it is encoded.

(a) Describe **one** advantage and **one** disadvantage of encoding data.

Advantage ....

....

....

....

Disadvantage ....

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.... **[4]**

(b) Identify the most suitable data type for the following fields in the order database.

Field Name   Data Type

Order completed?   _____

Total cost of order _____   **[2]**

(c) Define the following terms used in relational database terminology.

Primary Key ....

....

....

....

Foreign Key ....

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.... **[4]**

(d) The field name is one component of the data dictionary.

Identify and describe **two** other components of a data dictionary associated with fields.

Component 1 ....

....

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Component 2 ....

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.... **[4]**

(e) Give an example of a complex query that could be used to search the customer table.

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.... **[2]**

5 Describe the characteristics of a customer record system.

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.... **[6]**

6 Each company employee is given an identification badge containing their name, department details, barcode and photograph.

    (i) Identify a suitable type of printer the company could use to print the name badge.

       .... **[1]**

    (ii) Justify your choice of printer.

       ....

       ....

       ....

       .... **[2]**

7 The company needs to ensure all individuals can use their on-line training packages.

(a) Identify **three** specialist input devices for physically disabled users who do **not** have the use of their limbs (arms and legs).

Device 1 ....

....

Device 2 ....

....

Device 3 ....

.... **[3]**

(b) The company uses different interfaces for on-line training packages.

(i) One of the interfaces used is command line.

Identify **two** characteristics of a command line interface.

Characteristic 1 ....

....

Characteristic 2 ....

.... **[2]**

(ii) Give **one** appropriate use for each of the following interfaces in the on-line training packages.

Natural language ....

....

Forms ....

.... **[2]**

(c) Identify and describe **three** design considerations for the tailored data-entry screens for the on-line training packages.

Consideration 1 ....

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Consideration 2 ....

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Consideration 3 ....

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.... **[6]**

8 All employees of the company use templates. One advantage of using templates is that it makes sure that the company's house style is used.

(a) Describe **two** other advantages of using templates.

Advantage 1 ....

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Advantage 2 ....

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.... **[4]**

(b) Explain why the company uses a house style.

....

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.... **[4]**

(c) Describe **two** facilities of word processing software used by employees producing a user guide that would **not** be needed when producing standard letters.

Facility 1 ....

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....

Facility 2 ....

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....

.... **[4]**

Turn over

9 The company is considering a move to new premises and is using a spreadsheet model to run simulations on the costs of relocating.

(a) Describe **two** advantages of using a spreadsheet model to run the simulations.

Advantage 1 ....

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Advantage 2 ....

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.... **[4]**

(b) Explain how variables and functions could be used in the spreadsheet model.

Variables ....

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Functions ....

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.... **[4]**

(c) Give an example of the use of a range and a row in the spreadsheet used to simulate the relocation of the company.

Range ....

....

Row ....

.... **[2]**

10 The company wants to use mail merge to send a letter to all its customers notifying them of the move to new premises.

(a) Identify **two** merge fields which could be placed into the letter.

Field 1 ....

....

Field 2 ....

.... **[2]**

(b) Give **two** advantages of using mail merge to produce the letters.

Advantage 1 ....

....

Advantage 2 ....

.... **[2]**

11 The company is creating a website advertising its move to new premises. The website will contain bitmap images.

(a) Identify **two** features of a bitmap image that make it suitable for use on a website.

Feature 1 ....

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Feature 2 ....

.... **[2]**

(b) Describe **two** disadvantages of using clip art images on the website.

Disadvantage 1 ....

....

....

Disadvantage 2 ....

....

....

.... **[4]**

Turn over

(c) Describe **two** advantages of using a graphics library to find images for use on the website.

Advantage 1 ....

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....

Advantage 2 ....

....

....

.... **[4]**

(d) The website will include a presentation that its customers can download.
The presentation will contain animations and hotspots.

Describe and give an example of how each of the following could be used in the presentation:

Animation ....

....

....

....

Example ....

....

Hotspots ....

....

....

....

Example ....

.... **[6]**

12 The company has hired a safety specialist to identify potential safety problems related to working with ICT.

Identify **two** potential safety problems the specialist could find and for each problem give a suitable different solution.

Problem 1 ....

....

Solution ....

....

Problem 2 ....

....

Solution ....

.... **[4]**

PLEASE TURN OVER FOR THE NEXT QUESTION

13 The company has installed CCTV cameras in its offices. Many employees have expressed concern over the installation of the cameras.

Discuss the legal and ethical implications of the installation of CCTV cameras in the offices.

The quality of your written communication will be assessed in your answer to this question.

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.... **[11]**

PLEASE TURN OVER FOR THE LAST QUESTION

14 The company is looking at producing on-line training for different subjects in schools. ICT has changed the way lessons in class are delivered, research is conducted and assessment is completed.

Discuss the impact of ICT on education.

The quality of your written communication will be assessed in your answer to this question.

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