Candidate Forename		Candidate Surname	
Centre Number		Candidate Number	

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED SUBSIDIARY GCE

G061

INFORMATION AND COMMUNICATION TECHNOLOGY

Information, Systems and Applications

TUESDAY 18 MAY 2010: Afternoon
DURATION: 2 hours

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the Question Paper

OCR SUPPLIED MATERIALS:
None

OTHER MATERIALS REQUIRED:
None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.

- 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 <u>ALL</u> the questions.

- 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 <u>120</u>, 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.

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]

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

3 **Draw a diagram, or write a description, 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 _____

_____

_____

_____ **[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 _____

_____

_____

_____ **[4]**

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

Identify and describe <u>TWO</u> other components of a data dictionary associated with fields.

Component 1 _____

_____

_____

_____

Component 2 _____

_____

_____

_____ **[4]**

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

_____

_____

_____

_____ **[2]**

5 Describe the characteristics of a customer record system.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ **[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 <u>THREE</u> 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 <u>TWO</u> characteristics of a command line interface.

Characteristic 1 _____

_____

Characteristic 2 _____

_____ **[2]**

(ii) Give <u>ONE</u> appropriate use for each of the following interfaces in the on-line training packages.

Natural language _____

_____

Forms _____

_____ **[2]**

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

Consideration 1 _____

_____

_____

_____

Consideration 2 _____

_____

_____

_____

Consideration 3 _____

_____

_____

_____ **[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 <u>TWO</u> other advantages of using templates.

Advantage 1 _____

_____

_____

_____

Advantage 2 _____

_____

_____

_____ **[4]**

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

_____

_____

_____

_____

_____

_____

_____ **[4]**

(c) Describe <u>TWO</u> facilities of word processing software used by employees producing a user guide that would <u>NOT</u> be needed when producing standard letters.

Facility 1 _____

_____

_____

_____

Facility 2 _____

_____

_____

_____ **[4]**

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 <u>TWO</u> advantages of using a spreadsheet model to run the simulations.

Advantage 1 _____

_____

_____

_____

Advantage 2 _____

_____

_____

_____ **[4]**

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

Variables _____

_____

_____

_____

Functions _____

_____

_____

_____ **[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 _____

_____

Feature 2 _____

_____ **[2]**

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

Disadvantage 1 _____

_____

_____

_____

Disadvantage 2 _____

_____

_____

_____ **[4]**

(c) Describe <u>TWO</u> advantages of using a graphics library to find images for use on the website.

Advantage 1 _____

_____

_____

_____

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 <u>TWO</u> potential safety problems the specialist could find and for each problem give a suitable different solution.

Problem 1 _____

_____

Solution _____

_____

Problem 2 _____

_____

Solution _____

_____ **[4]**

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]**

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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_____ **[11]**

OCR

RECOGNISING ACHIEVEMENT