OXFORD CAMBRIDGE AND RSA EXAMINATIONS
AS GCE

G061/01

INFORMATION AND COMMUNICATION TECHNOLOGY

Information, Systems and Applications

MONDAY 3 JUNE 2013: Afternoon
DURATION: 2 hours
plus your additional time allowance

MODIFIED ENLARGED

Candidate forename		Candidate surname	

Centre number						Candidate number				

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

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INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. HB pencil may be used for graphs and diagrams only.**
- **Answer ALL the questions.**
- **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).**

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. These questions are marked with an asterisk (*).**
- **Any blank pages are indicated.**

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A construction company builds and sells houses.

The company has a website. The website contains data about the company, has a search facility to help customers find the right house and gives customers the opportunity to place a deposit for a house.

1 (a) Describe the term data.

_____

_____

_____

_____ **[2]**

(b) The company website contains dynamic data.

(i) Describe what is meant by dynamic data.

_____

_____

_____

_____ **[2]**

(ii) Give TWO examples of how the website could make use of dynamic data.

1 _____

_____

2 _____

_____

[2]

(c) The website contains thumbnail images of the houses.

Describe TWO advantages of using thumbnail images on the website.

1 _____

_____

_____

_____

2 _____

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_____

[4]

(d) Describe TWO validation methods that could be applied to a credit card number used to pay the deposit.

1 _____

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_____

2 _____

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_____

[4]

When a customer pays a deposit online, the company checks that the money has been received in its account.

If the money has not been received then an email is sent to the customer informing them.

If the money has been received the property is taken off the market. The customer is sent a confirmation email and a statement for the remaining amount.

2 Draw a diagram to show the input, process, storage, output stages for the above system.

[6]

The company uses a variety of different items of software and hardware.

3 (a) Using examples, describe the difference between software and hardware.

_____

_____

_____

_____

_____

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_____

_____ **[4]**

The company has several employees who are physically disabled.

(b) Identify THREE specialist hardware devices for employees who do not have the use of their arms.

1 _____

_____

2 _____

_____

3 _____

_____

[3]

The company has been investigating new invoicing systems to replace its old system.

4 (a) Describe THREE characteristics of an invoicing system.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

3 _____

_____

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_____

[6]

(b) The company stores different files with different file types.

Explain TWO advantages of having different file types.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

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QUESTION 5 BEGINS ON PAGE 14

Part of the spreadsheet that the company currently uses is shown opposite.

5 (a) (i) Describe absolute and relative cell referencing.

Absolute _____

_____

_____

_____

Relative _____

_____

_____

_____

[4]

(ii) Using the spreadsheet shown, give examples of how absolute and relative cell referencing could be used.

_____

_____

_____

_____ **[2]**

	A	B	C	D	E	F	G
1	House ID	Agent	Price	Commission		Commission Table	
2	45	Fred	£149,999	3.00%		0	2.50%
3	56	Fred	£89,000	2.50%		100,000	3.00%
4	78	Wilma	£238,500	3.50%		200,000	3.50%
5	79	Betty	£129,995	3.00%		350,000	4.00%
6	101	Betty	£499,999	4.00%			
7	134	Fred	£249,950	3.50%			
8	156	Wilma	£199,999	3.00%		Total Sales	
9	208	Barney	£99,950	2.50%		Fred	£838,948
10	340	Fred	£349,999	3.50%		Wilma	£438,499
11						Betty	£629,994
12						Barney	£99,950

(b) Explain TWO advantages of using ranges in the spreadsheet.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

(c) Explain TWO advantages to the company of storing the data across multiple worksheets.

1 _____

_____

_____

_____

2 _____

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_____

_____

[4]

Part of the database that the company currently uses is shown below.

HouseID	Location	Number of Bedrooms	En-Suite?	Garden Length (m)
1	Gloucester	5	Y	250
2	Cirencester	4	N	59
3	Salisbury	6	Y	235
4	Gloucester	3	Y	150
5	Cirencester	4	Y	10.5
6	Cirencester	5	Y	100
7	Salisbury	4	N	50
8	Larkhill	4	Y	750
9	Larkhill	5	Y	200

6 (a) The company uses the database to search for suitable houses for customers.

Write a suitable query to find all houses that are in Gloucester, have three bedrooms, an en-suite and a garden that is at least 60 m long.

_____

_____

_____

_____ **[4]**

(b) Identify, using the part of the database opposite, the field that should be used as the primary key.

_____ **[1]**

Explain why the field you have chosen is the most suitable field to be the primary key.

_____

_____

_____

_____ **[2]**

One characteristic of data in first normal form (1NF) is that there must be a primary key.

(c) (i) Identify TWO other characteristics of data in 1NF.

1 _____

_____

2 _____

_____

[2]

(ii) Describe TWO advantages of normalisation.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

(d) Identify the most appropriate data types for the following fields.

Number of bedrooms _____

Garden Length _____

[2]

The company is creating a new tailored data entry screen for its database. One of the design considerations is font.

(e) Describe THREE other design considerations for the new tailored data entry screen.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

3 _____

_____

_____

_____

[6]

(f) Some of the data is encoded before being entered into the database.

Describe TWO DISADVANTAGES of encoding data.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

7 The company is reviewing the documentation that it produces and is considering making more use of templates.

(a) Describe TWO advantages to the company of using templates.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

(b) The company wants to personalise the communications it sends to its customers and has been told that mail merge can be used to do this.

Describe TWO other advantages of using mail merge.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

8 The company is giving a computer presentation to potential customers.

(a) Describe the following features of presentation software and, for each, give an example of its use in the presentation.

Hotspot _____

_____

_____

_____ **[2]**

Example of use _____

_____ **[1]**

Slide Transition _____

_____

_____

_____ **[2]**

Example of use _____

_____ **[1]**

(b) The company is thinking about using different types of images in the presentation.

Evaluate the suitability of using bitmap images in the presentation.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ **[6]**

9 The company is concerned about the security of its ICT systems.

(a) State TWO rules that can be applied by the network manager to ensure that passwords remain effective.

1 _____

_____

2 _____

_____

[2]

(b) Describe the difference between the role of a User ID and a password.

_____

_____

_____

_____ **[2]**

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QUESTION 10 BEGINS ON PAGE 30

10 The company is investigating health problems which staff might suffer as a result of working with ICT equipment.

Describe THREE health problems related to working with ICT equipment and for each give a different solution.

1 _____

_____

_____

_____ **[2]**

Solution _____

_____ **[1]**

2 _____

_____

_____

_____ **[2]**

Solution _____

_____ **[1]**

3 _____

_____

_____

_____ [2]

Solution _____

_____ [1]

11* Discuss the impact and consequences of future developments in ICT on the way that the company communicates with its customers. [11]

_____

_____

_____

_____

_____

END OF QUESTION PAPER

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