OCR
RECOGNISING ACHIEVEMENT

SPECIMEN L1/2

...day ... Month 2012 – Morning/Afternoon

LEVEL 1/2 CAMBRIDGE NATIONAL AWARD/CERTIFICATE/DIPLOMA IN ICT

R001: Understanding computer systems

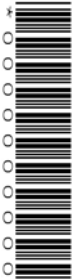| Candidates answer on the Question Paper	
OCR Supplied Materials: • Clean copy of the pre-release case study	**Duration**: 1 hour
Other Materials Required: • None	

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

• Write your name. Please write clearly and in capital letters, centre number and candidate number in the boxes above.
• Use black ink. HB Pencil may be used for graphs and diagrams only.
• Answer **all** the questions.
• Read each question carefully. Make sure that you know what you have to do before starting your answer.
• Write your answer to each question in the space provided, however additional paper may be used if necessary.
• Do **not** write in bar codes.

INFORMATION FOR CANDIDATES

• The number of marks for each question is given in brackets **[ ]** at the end of the question or part question.
• The total number of marks for this paper is **60**.
• This document consists of **12** pages. Any blank pages are indicated.

Turn over

SECTION A

The questions in this section are based on the scenario in the case study and your background research.

Answer **all** questions.

1 In order to make bookings, leisure centre customers will need to connect to the internet.

(a) What type of software would be needed to view webpages?

.... **[1]**

(b) State **two** file types suitable for an on-line brochure containing information about the leisure centre and future events?

....

.... **[2]**

(c) When customers use a computer to access the internet, state **one** output device needed to view a webpage when making a booking.

.... **[1]**

(d) When customers use a computer to access the internet, state **one** output device needed to produce a paper copy of the booking.

.... **[1]**

(e) Users of the internet face a number of security threats.

Describe how the following are a threat to the data held on a computer system.

Phishing

....

....

....

.... **[2]**

Worm

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....

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.... **[2]**

(f) Describe **two** ways in which the leisure centre could make it easier for smartphone users to make bookings directly from their phone.

1. ....

....

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2. ....

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....

.... **[4]**

(g) When making a booking, customers will be asked to provide an email address.

    (i) Explain why the leisure centre might want to collect a customer's email address.

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.... **[2]**

    (ii) Name the Act which places limits on how the leisure centre can use personal data such as an email address.

.... **[1]**

(h) Customers will be required to make a payment for the services they want to book. The data required to make these payments will be transferred using encryption technology.

Describe how data encryption can be used to transfer this data securely.

....

....

....

.... **[3]**

2 A leisure centre employee has suggested that it would be a good idea to include a photograph of a fast-food restaurant on the leisure centre's health and fitness web-page. He has found a suitable picture on the website of a fast-food restaurant business.

(a) State the Law (Act) that must be complied with if this image is to be used on the leisure centre website?

.... **[1]**

(b) state **two** actions that the leisure centre would need to take in order to use these images legally.

1. ....

....

2. ....

.... **[2]**

3 The leisure centre makes use of customer data such as their postcode and date of birth. This data is stored in a spreadsheet.

State **two** ways that a spreadsheet file could be protected from unauthorised editing.

1. ....

....

2. ....

.... **[2]**

4 When making a booking, customers will be asked for their date of birth. Data validation will be used when this information is entered.

Discuss the benefits of data validation to the leisure centre.

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.... **[6]**

[Section A Total: 30]

Section B

The questions in this section are based on the scenario in the case study and your background research.

Answer **all** questions.

5   Jane is prompted to enter her username and password when she starts up her computer. Her current password is: 95pf#tws

   (a)   State **two** features that help to make 95pf#tws a good password.

   1. ....

   ....

   2. ....

   .... **[2]**

   (b)   state **two** ways that Jane could ensure that her password is kept secure.

   1. ....

   ....

   2. ....

   .... **[2]**

 Turn over

6 Jane has the following activities that she needs to perform:

- 21st March: 10am: visit Hallam's Builders Ltd

- 21st March: 11.30am: visit John Kelvin at home

- 21st March: write report on investigation into noise pollution (need two hours)

- 22nd March: email report to my manager.

(a) what type of software is most suitable to help Jane organise these activities?

.... **[1]**

(b) Explain **two** reasons why the software you have chosen is suitable for this purpose.

1. ....

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2. ....

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.... **[4]**

7 Jane is producing a report on a visit to a local restaurant, her report will include photographs of the restaurant kitchen.

(a) Jane wants to edit the photographs that she has taken.

State **one** type of software that is most suitable for editing images.

....

.... **[1]**

(b) Jane needs to store a wide range of photographs on her computer, so that she can use them at a later date.

State **two** factors Jane should consider when storing the information on her computer.

1. ....

....

2. ....

.... **[2]**

(c) Jane has created the first draft of her report. She wants to send it to her boss, so her boss can check it and recommend improvements.

Describe **two** reviewing facilities of a word processing program that Jane's boss could use to do this.

1. ....

....

....

2. ....

....

.... **[4]**

8 At least once a month, Jane will be required to visit the council offices. While she is there she will need to connect her laptop computer to the council's wireless computer network (called ATTCOUNTNET).

Describe how Jane can connect her computer to the ATTCOUNTNET wireless network.

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.... **[4]**

9 The council uses GPS location tracking so that they can locate their environmental health officers.

Describe how GPS tracking could be used to determine the location of an environmental health officer.

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.... **[2]**

10 Discuss why an employer, such as a council, may wish to monitor the location of its employees, while they are away from their usual place of work.

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.... **[8]**

[Section B Total 30]

[Paper Total 60]

END OF QUESTION PAPER

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Sample Assessment Material

LEVEL 1/2 CAMBRIDGE NATIONAL AWARD/CERTIFICATE/DIPLOMA IN ICT

R001: Understanding computer systems

MARK SCHEME

Duration: 1 hour

MAXIMUM MARK   60

SPECIMEN

This document consists of 12 pages

Section A

This section relates to the scenario in the case study and background research.

Question			Answer	Marks	Guidance
1	**(a)**		1 mark for the correct answer: Web browser	**1**	
	(b)		One mark for each correct answer, max 2. File formats suitable for use, e.g: .pdf .doc	**2**	
	(c)		1 mark for the correct answer: Monitor	**1**	
	(d)		1 mark for the correct answer: Printer	**1**	
	(e)		Max 2 marks for each description: e.g. Phishing A request for personal information (1 mark) which can be used to carry out identify theft (1 mark). Worm A malicious computer program (1 mark) which can automatically create copies of itself on other computers (1 mark)	**(2x2)** **4**	

Question			Answer	Marks	Guidance
(f)			Max 2 marks for each description: e.g. Adapt the website for smaller screens (1) by scaling down images and using less text (1) Introduce a mobile phone app (1) to adapt the booking form to the functionality of the phone (1)	**(2x2)** **4**	
(g)	**(i)**		Max 2 marks for reason and explanation: e.g. • to enable acknowledgement of bookings (1), so that members know their requests have been actioned and/or confirmed (1) • to enable the leisure centre to send reminders (1), so that they do not have sports classes running half empty (1) • to enable the leisure centre to inform members of any problems (1), providing good customer services (1).	**2**	Accept examples as part of explanation
	(ii)		1 mark for the correct answer: Data Protection Act	**1**	
(h)			Max 3 marks: e.g. Data is converted into a code using an encryption key (1) before being transmitted (1) it is then encrypted into the original data (1) using a decryption key (1)	**3**	

Question			Answer	Marks	Guidance
2	(a)		1 mark for the correct answer: Copyright, Designs and Patents Act	1	
	(b)		1 mark for each correct action, max 2 e.g. Identify the copyright holder (1) Obtain permission from the copyright holder (1) Pay any necessary fees (1) Acknowledge copyright (1)	2	
3			1 mark for each correct way, max 2 Password protect file (to open or to edit) (1) Make read-only (1) Lock specific cells to prevent editing (1)	2	
4			**Level 3** A comprehensive discussion of the benefits of data validation demonstrates a thorough understanding of data validation. The benefits discussed are clearly linked to the requirements of the leisure centre. (5–6 marks) **Level 2** A sound discussion of at least one benefit demonstrates a sound understanding of data validation. The benefit(s) must be benefits to the leisure centre. (3-4 marks) **Level 1** May be a list with little/no discussion. Demonstrates limited understanding of data validation. (1–2 marks) 0 marks – no response or no response worthy of credit	6	Relevant points include: Validation • that the data is reasonable/sensible • check data within limits/range check • check data is of the correct data type/type check • format check e.g. dd/mm/yy • length check/check data has set number of characters • presence check/check data is entered • existence check/check that the data exists Benefits of using validation You can restrict the date that is entered so that a real date is entered, not an invalid date, people who are too young, old. You can use the data to target age groups, e.g. 16–18 to send out incentives and advertising materials. Check correct number of characters, e.g. might just want just the year, not day and month.

Section B

This section relates to Scenario 2 of the pre-release

Question			Answer	Marks	Guidance
5	**(a)**		1 mark for each correct answer, max 2: e.g. a mixture of letters, numbers and other symbols (1) a complex phrase that is hard to guess (1) uses random characters (1) uses many different characters (1) avoids using username or personal details (1) password is between 8 and 15 characters in length (1)	**2**	Examples count as one mark in total
	(b)		1 mark for each correct answer, max 2: e.g: do not write them down (1) memorise them (1) change them frequently (1) do not let others see you entering them (1)	**2**	

Question			Answer	Marks	Guidance
6	**(a)**		1 mark for the correct answer: Diary management software	**1**	
	(b)		Max 2 marks for each reason and explanation, max 4: e.g. Can store appointments (1) so that meetings do not overlap/so appointments are not missed/forgotten (1) Can set reminders (1) so appointments are not missed/forgotten (1) Can set priority for tasks (1) so that the most important tasks are done first/as some tasks have to be done before others (1) Can set completion deadlines (1) so that tasks are completed on time/so that the report is prepared beforehand (1)	**(2x2)** **4**	Accept examples as part of explanation
7	**(a)**		One mark for correct answer: • Photo editing software/Graphics software (1)	**1**	
	(b)		1 mark for each correct factor, max 2: e.g. some file types compress the image (1) reducing the file size (1) without reducing the quality (1)	**2**	Must be suitable for editing images.

Question			Answer	Marks	Guidance
	(c)		Two matched pairs, max 2 marks for each reviewing facility: e.g. Make edits using tracked changes (1) which can either be accepted / rejected(1) Make general comments/suggestions by inserting comments (1) which can be read /deleted once they are no longer needed (1)	4	
8			Max 4 marks for a description: e.g. ensure wireless facility on computer is switched on (1) check computer is in range of network (1) display list of networks in range (1) locate and connect to ATTCOUNTNET (1) when prompted, enter the security key (1) / insert USB device containing network settings (1) and follow instructions to connect to network(1)	4	
9			Max 2 marks for a description: e.g. GPS provides a location for the phone (1) Uses data from satellites to identify the location on earth (1) This location can be transmitted to a third party who can use it to locate the employee (1)	2	

Question	Answer	Marks	Guidance
10	**Level 3** Answer provides a detailed discussion of why a council may wish to monitor the location of its employees identifying impacts and consequences. Demonstrates a detailed understanding of the issues. (7–8 marks) **Level 2** Answer provides a sound discussion of why a council may wish to monitor the location of its employees identifying impacts and consequences. Demonstrates a sound understanding of some issues. (4–6 marks) **Level 1** May be a list with little/no discussion. Demonstrates limited understanding of the issues. (1–3 marks) 0 marks – no response or no response worthy of credit	8	Relevant points include Employees feel safer. If a problem occurs the employer knows where the employee is. Employer may feel a 'duty of care' to its employees who it requires operate away from their usual place of work. Helps employer to demonstrate it is taking care of its employees' safety (health and safety issue). Could be used to track employees' location whilst they are not working. Could be used to spy on employee. Could be used to gather evidence against an employee (e.g. that they weren't where they should be). (This point could be a benefit or drawback of the technology, depending on the viewpoint developed by the candidate).

Learning Outcomes (LO) Grid

Question Number			LO1	LO2	LO3	LO4	
1	a		1				Section A
1	b			2			
1	c		1				
1	d		1				
1	e					4	
1	f		4				
1	g	i			2		
1	g	ii				1	
1	h					3	
2	a					1	
2	b					2	
3				2			
4				6			
5	a			2			Section B
5	b			2			
6	a				1		
6	b				4		
7	a		1				
7	b			2			
7	c				4		
8			4				
9			2				
10			8				
Total Marks			**22**	**16**	**11**	**11**	**60**

Note: The header row above spans "Content Area" across LO1, LO2, LO3, LO4.

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