

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS General Certificate of Education Advanced Level

	CANDIDATE NAME			
	CENTRE NUMBER		CANDIDATE NUMBER	
*				
5 /	APPLIED INFO	RMATION AND COMMUNICATION TECHNOLOGY		9713/31
*`	Paper 3			May/June 2011
7 4				1 hour 15 minutes
5	Candidates ans	wer on the Question Paper.		
5 3	No additional m	aterials are required.		

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in. Write in dark blue or black pen.

Do not use staples, paper clips, highlighters, glue or correction fluid.

You may use a pencil for any diagrams, graphs or rough working.

DO NOT WRITE IN ANY BARCODES.

Answer all questions.

The number of marks is given in brackets [] at the end of each question or part question.

The businesses described in this paper are entirely fictitious.

This document consists of 18 printed pages and 2 blank pages.



Scenario 1 Questions 1 and 2

Popular Individual Electronics Ltd (PIE) is an electronics company that is going to develop a new home entertainment system. PIE needs to undertake market research before they produce a prototype which can then be approved for production. The project manager, Derek, has to consider the technical features and produce a financial model.

There are a number of teams involved in producing the prototype, including a hardware development team and a software development team.

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1	(a)	Des syst	cribe how each of these pieces of hardware will be used in the home entertainment em.	For Examiner's Use
		(i)	MP3	
			[2]	
			USB port	
		(")		
			[2]	
		(iii)	Secure Digital Memory card	
			[2]	

(b) Explain how the company would assess the market for its new product by using computer-assisted telephone interviewing.

	[4]
(c)	Explain how ICT would be used to analyse the results from this research.
	[3]

2	(a)	Describe how Derek, the project manager, would use a financial model during the planning stage.	For Examiner's Use
		[3]	
	(b)	Describe the data that Derek would input into the finished model.	
		[3]	

(c) Explain how project management tools could be used to monitor the progress in producing the prototype home entertainment system.

[4]

Scenario 2 Questions 3, 4, 5 and 6

The Bank of Smalltown has branches all over the world. It uses an intranet for the transfer of information between branches. Customers are concerned about the security of their personal data held in the bank's computer systems. When a customer applies for a bank loan an expert system is used to see if the loan can be approved.

7

The bank has a website for online banking.

The bank uses video conferencing suites for communication. It wishes to support schools by providing the basic hardware and software to enable them to communicate with the bank and with each other using video conferencing.

3	(a)	Describe four ways that the intranet would be used.	For Examiner's
			Use
		[4]	
	(b)	Describe the concerns that the customers may have in relation to computer fraud.	
		[4]	
			1

8

(a) Describe three features you would expect to see on the online banking website's login 4 page. [3] (b) Explain an authentication technique that could be used by a customer of the bank in making transactions. [3] _____

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(c)	Describe what is meant by each of the following and explain why the bank uses them in its business.		
	(i)	VPN	
		[3]	
	(ii)	VOIP	
		[3]	

(111)	Proxy servers	For Examiner's Use
		030
	[3]	

5	The bank uses video conferencing suites to arrange meetings between groups of directors in different countries.	For Examiner's
	The schools use their video conferencing facilities to allow groups of students to communicate with students at other schools.	Use

Compare and contrast these two different uses of video conferencing.

 [8]

6 Explain why the use of the expert system for approving a loan would benefit the bank.

Scenario 3 Questions 7, 8 and 9

A Local Government Authority uses ICT in many ways. One of these is a website to provide the residents with up-to-date information. The authority is concerned about the digital divide.

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Describe what the residents would use the website for.
[6]

7

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8	(a)	Explain how technical developments in ICT are reducing the digital divide among the residents.	For Examiner's Use
		[5]	

16

(b) Describe how the Local Government Authority could educate residents in order to reduce the digital divide.

[4]

9 The Local Government Authority is concerned about anti-social behaviour when using ICT. Give examples of this type of behaviour and describe how they may be prevented.

[8]

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