



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Advanced Level

CANDIDATE  
NAME

CENTRE  
NUMBER

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**APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

**9713/31**

Paper 3

**May/June 2011**

**1 hour 15 minutes**

Candidates answer on the Question Paper.

No additional materials 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.

1 (a) Describe how each of these pieces of hardware will be used in the home entertainment system.

*For  
Examiner's  
Use*

(i) MP3

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(ii) USB port

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(iii) Secure Digital Memory card

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2 (a) Describe how Derek, the project manager, would use a financial model during the planning stage.

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(b) Describe the data that Derek would input into the finished model.

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For  
Examiner's  
Use



**Scenario 2**  
**Questions 3, 4, 5 and 6**

*For  
Examiner's  
Use*

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.

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.





4 (a) Describe **three** features you would expect to see on the online banking website's login page.

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[3]

(b) Explain an authentication technique that could be used by a customer of the bank in making transactions.

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[3]

(c) Describe what is meant by each of the following and explain why the bank uses them in its business.

*For  
Examiner's  
Use*

(i) VPN

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(ii) VOIP

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**(iii)** Proxy servers

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*For  
Examiner's  
Use*

- 5 The bank uses video conferencing suites to arrange meetings between groups of directors in different countries.  
The schools use their video conferencing facilities to allow groups of students to communicate with students at other schools.  
Compare and contrast these two different uses of video conferencing.

For  
Examiner's  
Use

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[8]

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

*For  
Examiner's  
Use*

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[3]

**Scenario 3**  
**Questions 7, 8 and 9**

*For  
Examiner's  
Use*

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.

7 Describe what the residents would use the website for.

*For  
Examiner's  
Use*

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[6]





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

*For Examiner's Use*

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