



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.

(i) MP3

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..... [2]

(ii) USB port

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(iii) Secure Digital Memory card

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

*For
Examiner's
Use*

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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.

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

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

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(i) VPN

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(ii) VOIP

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(iii) Proxy servers

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

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[3]

Scenario 3
Questions 7, 8 and 9

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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.

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