



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Advanced Level

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**APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

**9713/03**

Paper 3

**October/November 2009**

**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 **15** printed pages and **1** blank page.



**Scenario 1****Questions 1 to 3**

Daniel has bought a portable media player. He has also bought some other computer equipment to help him run his small company, which makes and sells pottery.

He uses software to produce his website, which includes photographs of his items for sale. He needs to use the software to produce advertising literature.

Daniel uses the internet to:

- maintain his accounts
- advertise and sell his goods
- keep in contact with his customers.

- 1 (a) The portable media player allows the recording of music.  
Explain how it is possible to store many thousands of songs on a 160 gigabyte media player.

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- (b) It has been predicted that music CDs and movie DVDs will be phased out by 2015.  
Describe the technological developments which have led to this prediction.

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(c) Daniel also has a home entertainment system. His television receives digital rather than analogue signals.

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(i) Describe the advantages and disadvantages of a digital system when compared to an analogue system.

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(ii) Describe the hardware which is used to receive digital signals rather than analogue signals.

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2 (a) Daniel is concerned about the security of his website.  
Describe how the website can be made more secure.

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(b) Describe ways in which Daniel can keep in contact with his customers using the internet.

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(c) Describe how Daniel could develop pages on his website to show his customers images of his goods.

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(d) An invoice is sent out with each item sold. Three part stationery is used. Name a suitable output device and explain why this has been chosen to output these invoices.

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- 3 (a) Daniel's computer uses wireless network technologies.  
Describe the advantages of using these compared to wired connections.

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- (b) Describe the health and safety risks to Daniel of using his computer system.

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**Scenario 2**  
**Questions 4 to 6**

MarquesAir is an airline that sells tickets for its flights on the internet.

MarquesAir train their pilots using flight simulators. The simulation seems very real to the pilots. They are able to assess their ability and also receive immediate feedback on any errors in their technique.

The company uses an expert system to do their financial planning.



4 MarquesAir produces electronic tickets rather than printed tickets.

(a) Describe the advantages to the airline company and the customers of electronic tickets.

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(b) Describe how it is possible to stop two people from using the same electronic ticket.

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(c) Explain the impact on society of electronic ticketing.

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5 (a) Describe the advantages of training pilots on a flight simulator.

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(b) Describe how the computer hardware and the pilot interact with each other to make the simulator function effectively.

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6 Describe how the expert system is used to carry out financial planning.

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**Scenario 3**  
**Questions 7 to 9**

Suitikal is a large company which manufactures drugs.

The company has decided to use market research to determine the best packaging for their products.

Suitikal is an international company which uses video conferencing to keep in touch with staff and customers around the world.

To enable them to improve efficiency, the company has employed a systems analyst to improve their existing systems.

7 Describe the stages of systems analysis which the analyst will follow.

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8 (a) Describe how market research helps Suitikal design the packaging for a new product.

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(b) Describe how computer systems in the laboratory help the company to develop and test a new drug.

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