



**Cambridge International Examinations**  
Cambridge International Advanced Level

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**APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

**9713/31**

Paper 3

**May/June 2014**

**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, glue or correction fluid.

You may use an HB 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.

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This document consists of **14** printed pages and **2** blank pages.

**Scenario 1**  
**Questions 1 to 4**

Pan European Airlines (PEA) requires its passengers to book and manage their flight bookings via the Internet using its online booking system.

PEA has a website offering services to their customers. One of the services is the issuing of electronic tickets (e-tickets) when passengers book a flight.

E-tickets are produced by the booking system prior to the flights and are used at check-in to issue boarding passes.

The airline has a call centre open 24 hours, every day, to deal with customer queries.

PEA uses computer systems for training pilots. It has training facilities for its pilots using computer simulations which require specialised hardware.

PEA uses computer systems for financial purposes. Gordon is the manager of the financial department and uses computer modelling to manage its finances.

1 (a) Describe **three** services other than the issuing of e-tickets that the PEA website could offer its passengers.

1 .....

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2 .....

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3 .....

..... [3]

(b) Describe **four** steps that a customer would follow when booking flights using PEA's website.

1 .....

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2 .....

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3 .....

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4 .....

..... [4]

(c) Describe what is meant by an electronic ticket.

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..... [1]

(d) Describe **four** advantages to a customer of booking an airline ticket online.

1 .....

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[4]

2 (a) Describe **two** benefits to the airline of using a call centre to answer passenger enquiries.

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2 .....  
..... [2]

(b) Discuss the advantages and disadvantages to a passenger of using a call centre for assistance rather than going to a travel agent.

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..... [6]

(c) The airline call centre uses Computer Telephony Integration (CTI) software.

Describe **two** features of CTI software that would be useful to the airline.

1 .....  
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2 .....  
..... [2]

3 (a) Describe the use of **three** specialised items of computer hardware that are required when using computer simulations to train pilots.

1 .....

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..... [6]

(b) Describe **three** advantages to the pilots of using computer simulations rather than real aircraft to learn to fly.

1 .....

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2 .....

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3 .....

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..... [3]



**Scenario 2**  
**Questions 5 to 7**

International Credit Enterprise is a bank with branches around the country. It holds customers' personal accounts and their savings accounts.

Customers can access their accounts either at a branch or by online banking via the bank's website.

The website can be used by disabled customers with suitably configured computers.

The bank also offers financial advice for customers and uses an expert system to help customers with their financial planning.



5 (a) Describe **five** difficulties that disabled people might encounter when trying to use online banking facilities.

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(b) Describe **three** software configurations of a personal computer that could be used to assist disabled people when accessing their bank accounts online.

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- 6 Explain how the bank's computer system would check that the person accessing the account details has the authority to do so.

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[6]

7 (a) Describe in detail the use of **five** components of an expert system for financial planning.

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(b) Describe **two** benefits to the bank of using an expert system.

1 .....  
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2 .....  
..... [2]

(c) Describe **two** drawbacks to the bank of using an expert system.

1 .....  
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2 .....  
..... [2]

**Scenario 3**  
**Questions 8 to 10**

A school has a computer network that can be accessed by students from any computer in the school and remotely through the school website.

The students use the computers to improve their learning. The teachers use ICT to assist in the assessment of the students' work and to keep records of the students' progress.

The school uses a VPN to enable teachers to access the school network from home.

8 Describe **five** ways in which the school's computers could be used to improve the students' learning.

- 1 .....
- .....
- 2 .....
- .....
- 3 .....
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- 4 .....
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- 5 .....
- ..... [5]

9 Describe how a teacher could use ICT to record the progress of students and report their progress to parents.

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- ..... [6]

10 (a) Describe **three** network devices which could be used in the school's network. Include details of how each would handle data packets.

Device 1 .....

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Device 2 .....

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Device 3 .....

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..... [6]

(b) Explain what is meant by a VPN.

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