CANDIDATE
NAME

CENTRE
NUMBER

CANDIDATE
NUMBER

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY　　　　**9713/32**

Paper 3　　　　　　　　　　　　　　　　　　　　　　　　　**October/November 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 **21** printed pages and **3** blank pages.

UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

Scenario 1
Questions 1 and 2

Cambridge Zoo is expanding its activities to bring in more visitors. The Zoo Director has decided to introduce a website for visitors that enables several functions to be carried out. Tickets can be bought in advance to be used with a bar code reader linked to an automatic gate.
In the visitor centre there is an expert system that can be used to identify animals.
A new building will house animals who hunt in the daytime and at night. The director wants it to be open in time for the peak visitor season. The new animal house will have a computer controlled environment.

1 **(a)** Explain the advantages to the zoo of allowing visitors to buy tickets in advance.

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(b) A visitor uses a touch screen to access the expert system. Describe:

    (i) the format of the input screen, giving an example of a suitable question,

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(ii) the output after the visitor has input all of the details.

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(c) Describe **three** security problems that the Zoo Director will have to consider when the website goes online. For **each** of these problems suggest a solution.

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2 **(a)** Describe features of Computer Aided Design (CAD) software that could be used in planning and creating a design for the new building.

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(b) Describe how project management software would be used in the production of the new building.

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(c) Describe **four** sensors and how they would be used for monitoring conditions in the new building.

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Scenario 2
Question 3

The Midland Examining Group (MEG) is investigating the use of computer marked examinations.

[Turn over

3 (a) Describe how a student would give their answers to questions.

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(b) Discuss the advantages and disadvantages to the examination group of using this system.

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Scenario 3
Question 4

The National Meteorological Service uses a supercomputer to produce weather forecasts.

4 (a) Compare and contrast a PC (personal computer) and a supercomputer.

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(b) Explain how supercomputers are used to produce weather forecasts.

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For
Examiner's
Use

Scenario 4
Questions 5 and 6

Goshawk Airways provides flights throughout the Middle East. They use flight simulators to train their pilots.
Goshawk Airways offers online booking through their website which is held, together with customer details, on a server.

5 **(a)** Describe how **four** output devices of the simulator are used to simulate the actual flying experience.

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(b) Explain why Goshawk Airways uses a flight simulator rather than using real aircraft to train pilots.

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(c) Describe how the simulator would enable pilots to experience the failure of an engine.

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6 (a) Explain **three** benefits to the airline of offering online booking.

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(b) Explain how each of the following are used to restrict access to customer details on Goshawk Airways' server.

(i) firewall

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(ii) digital certification

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(iii) encryption

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(c) Explain the different functions of a file server and a typical PC.

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Scenario 5
Question 7

Bangalore Audio Company (BAC) distributes electronic goods to the south of India. It uses ICT systems to assist with all aspects of the business. Just in time (JIT) is used to order goods from suppliers and despatch goods to customers.
Damaged goods are sold on auction pages which are part of the BAC website.

7 (a) Explain how stock control and JIT would be used by BAC.

[4]

(b) Describe the features you would expect to see on BAC's auction website.

[4]

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