Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER					

9821149814

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

Paper 3 **February/March 2017**

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.

This document consists of **18** printed pages and **2** blank pages.

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Scenario 1

Questions 1, 2 and 3

A company employs salespeople to design and sell new kitchens.

The company supplies purpose-built computer-aided design software for its salespeople to use when designing the kitchens. The software is installed on laptops provided for the salespeople to take to prospective customers' homes when they try to sell a new kitchen. The software can run locally on the laptop. The software also needs to contact the company servers over the internet for updates and additional features.

The salespeople also use the laptops to keep in contact with the company while they are in customers' homes. The laptops can connect wirelessly to the internet.

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1 Describe features of the purpose-built computer-aided design software that would assist the salesperson in designing a new kitchen for a customer.

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2 Explain how a wireless connection to the internet can be set up to try to ensure that the data that is transferred is kept secure.

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3 Describe ways in which the salesperson could use the internet to keep in contact with the company.

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Scenario 2

Questions 4 and 5

A cinema has an online booking system that allows customers to choose and pay for specific seats in the cinema.

The cinema shows digital movies. It also shows live events, such as rock concerts, from around the world using satellite technology.

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4 Describe the inputs, processing and outputs that take place when two customers try to book the same seat simultaneously over the internet.

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5 Describe how satellite technology enables a live event to be viewed in the cinema.

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Scenario 3

Questions 6, 7 and 8

A government of a country is concerned about the unequal access to the internet by its citizens.

The government is trying to reduce the digital divide.

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6 Describe the factors that would lead to unequal access to the internet by citizens.

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7 Explain why reducing the digital divide is important to the government.

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8 Describe the increased costs for the government in order for them to reduce the digital divide amongst its citizens.

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Scenario 4

Questions 9, 10 and 11

A software company sells its software as downloadable files purchased by customers via a website.

A web server stores the company website where customers can choose and pay for software.

A file server is used to store files for download. Customers may use file transfer protocol (FTP) to log in and download their chosen software.

A number of different protocols are used to transfer the files and the website data over the internet.

Customers are required to log in to the servers using their own computers in order to purchase and download software. The customers often use firewalls to protect their own computers but these firewalls may cause FTP to fail.

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9 **(a)** Describe how an FTP connection using active mode is established between the file server and the customer's computer.

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(b) FTP connections are not usually secure. Describe how FTP connections may be secured to protect data.

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10 Explain why a customer's firewall may cause the FTP connection to fail and describe how this problem may be overcome.

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11 HyperText Transfer Protocol (HTTP) is used by the World Wide Web. Describe the purpose of this protocol.

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Scenario 5

Questions 12 and 13

A company uses software to automatically produce business documents such as letters, memos and address labels.

Users can select the data to be merged into the business documents using the facilities provided by the software.

The company has an intranet which can be used to access the business documents stored on the company servers.

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12 **(a)** Describe the use of each of the following features in selecting data to merge into a business document.

(i) hyperlink:

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(ii) drop-down menu:

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(b) Describe the use of object link embedding (OLE) in the creation of the documents.

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13 Discuss the benefits and drawbacks to the company of having an intranet.

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