Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER					

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APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY **9713/33**

Paper 3 **October/November 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 **14** printed pages and **2** blank pages.

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Scenario 1

Questions 1, 2, 3 and 4

The market research department of a large company stores details of its interviewers and interviewees in a database. The database is stored on multiple servers on the company network.

It uses a database management system (DBMS) to access the database.

The market research department uses personal interviewing, telephone interviewing and online questionnaires to carry out the research. The research department uses computers when carrying out personal interviewing.

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1 Describe the benefits of storing the database on more than one server.

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2 Explain the functions of a DBMS.

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3 Discuss the advantages and disadvantages of using online questionnaires for capturing research data.

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4 Other than online questionnaires, describe how computers are used when carrying out research by personal interviewing.

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Scenario 2

Questions 5, 6, 7 and 8

A bank has branches in many towns and cities around the world.

The bank offers personal banking services at every branch as well as providing an online banking service.

The bank stores the personal and financial details of all its customers in encrypted files on secure servers. Each branch of the bank has a local area network (LAN) that is connected to the other LANs to form a secure wide area network (WAN) so that all the details can be accessed from any branch.

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5 The bank has a suitable computer to use as a server for this online banking service.

Explain how the features of such a computer enable it to be used as a server.

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6 Describe how the bank could use different ways to connect the branch LANs to form a secure WAN.

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7 Discuss the advantages and disadvantages to disabled people of using online banking.

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8 Describe, in detail, how the use of encryption could prevent unauthorised people from seeing customers' details.

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Scenario 3

Questions 9, 10, 11 and 12

A multinational school uses ICT for learning and assessment.

Some teachers in the school use computers to help the students' learning. Other teachers prefer a more traditional approach without the use of computers.

Those teachers who use computers can create online presentations and courses for their students.

The teachers are worried about security issues when using ICT to administer student tests and examinations.

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9 Explain how ICT can be used to assess the progress of students' learning.

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10 **(a)** Describe the features of web authoring software that a teacher would use to create an online presentation.

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(b) Describe how overlay software could be used to prepare an image for use in an online presentation.

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11 Compare and contrast the use of computers to help learning with those traditional learning methods that do not use computers.

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12 Describe the drawbacks of using online examinations to test the students.

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