CANDIDATE NAME

CENTRE NUMBER

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APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY　　　　**9713/13**

Paper 1　　　　　　　　　　　　　　　　　　　　　　　　　　　　**May/June 2012**

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 **18** printed pages and **2** blank pages.

UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

Scenario 1
Questions 1 and 2

Oslo Banking is a large banking organisation which offers its customers loans, mortgages and insurance as well as managing their accounts.

The organisation also uses an online banking system which lets customers access their account through the internet.

The personal data of the customers are kept on the bank's central computer. The bank uses a variety of security methods to prevent hackers from accessing the data either directly or by phishing or pharming. In addition, the bank needs to take steps to safeguard the privacy of customer data.

The bank is currently undertaking a large advertising campaign to boost the image of the organisation. It has decided to use multimedia presentations in shopping malls to do this.

1 **(a)** Hackers use key logging software to intercept customer passwords.

Describe **four** ways that banks attempt to prevent this from happening.

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(b) Describe **three** benefits of online banking for the bank.

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(c) Describe **three** drawbacks of online banking for the bank.

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(d) Other than security methods, describe **four** ways the bank can safeguard the privacy and confidentiality of customer data.

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2 **(a)** There are three types of advertising: business, product and service advertising.

Name and describe the type of advertising that Oslo Banking will use.

Name ....

Description ....

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.... [2]

(b) Describe, with reference to the scenario, **four** features which are found in multimedia presentations which would not be found in a hardcopy magazine.

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(c) Without making reference to the features of a multimedia presentation, give **three** advantages of using this method of advertising.

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Scenario 2
Questions 3, 4, 5 and 6

The University of Tawara Beach (UTB) is going to have a number of purpose built computer suites which will all be networked together. This will encourage the use of ICT in teaching and learning. Sean Jones, a systems analyst, has been employed by UTB to develop the new system.

He has already completed the Analysis phase and collected information from teachers about what they would like the system to do. Some teachers want a system which they can use in their existing lessons. They would still be in total control of the learning. Others would prefer a system whereby the teacher just supervises the students and the computer takes over the whole learning process.

Sean will need to specify the required software and additional hardware for the system allowing for the possibility that both approaches to teaching will be used. He is assuming that basic PCs will be provided with a monitor, keyboard and mouse.

Sean will need to design documentation to show the teachers how to use the system.

The rooms will all need to have air conditioning systems as Tawara has a very warm climate.

3 Other than those given in the scenario, discuss the benefits of using ICT in the classroom.

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4 **(a)** Describe **four** types of additional hardware and how they could be used by a student in this system.

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(b) Describe **four** types of software and how they would be used by a teacher for record keeping and preparing and delivering lessons.

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5 Describe **five** items of user documentation, including the reasons for their inclusion.

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6   Below is a diagram of a simple air conditioning system.

Valve

Condensing unit   **Evaporating unit**

Compressor

(i)   State where the pressure sensor would be located.

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(ii) Describe the role of the microprocessor in this system.

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Scenario 3
Questions 7 and 8

North China Media Ltd (NCM), based in Tianjin, owns the China Weekly magazine. It uses the latest technology to print the magazine. It uses computerised plate making and typesetting techniques. Typesetting involves using a computer to set the layout of a page.

NCM employs a number of journalists to write articles. These journalists tend to work from home.

7 **(a)** Kerning and leading are two features of typesetting.

Describe what is meant by these terms.

Kerning ....

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Leading ....

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(b) Give **three** reasons why setting the bodytext font size and type is important.

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 [Turn over

8 Describe **four** benefits to the journalists of working from home.

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Scenario 4
Questions 9, 10 and 11

ICE Ltd is an English company which manufactures refrigerators. Jasvir, the manager of the payroll section has decided that the current payroll system is out of date and has employed Moira, a systems analyst to investigate the current system and develop a new one.

The existing computer system produces payslips but no other output. Jasvir has told Moira about the need for detailed financial reports and exception reports to be produced, in addition to the payslips. The only financial or exception reports available currently are manually produced.

Jasvir and Moira will be using time management software to monitor the progress of this project.

9 **(a)** Describe **two** items which Jasvir would expect to be contained in the exception reports.

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(b) Describe **six** financial reports which Jasvir would expect to see produced by a computerised payroll system.

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10 Describe, in detail, **four** methods of researching the current system of producing reports. For each method give a drawback.

Method 1 ....

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Drawback ....

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Method 2 ....

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Drawback ....

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Method 3 ....

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Drawback ....

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Method 4 ....

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Drawback ....

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11 (a) Describe, using examples from the systems life cycle, what is meant in time management by the following terms.

Sequential activities ....

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Parallel activities ....

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(b) Name a graphical method which is used to show these activities.

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(c) Describe what is meant by the critical path method as used in project management.

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