UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Advanced Level

CANDIDATE
NAME

CENTRE
NUMBER

CANDIDATE
NUMBER

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY **9713/12**

Paper 1 **October/November 2013**

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, 2 and 3

Jatinder is an estate agent. He works for the Downtown Realty Corporation. Part of his job is to estimate the value of houses which he helps to sell. This involves him being out of the office visiting properties. Because of this he needs to use ICT.

While he is out of the office, he uses phone conferencing to remain in contact with his colleagues.

Most of the Corporation's customers live quite close to the office. The Corporation is in competition with a number of other local estate agent companies. At the moment it advertises using locally placed posters. It is considering creating a website.

1   For each of the following ICT devices, describe a different purpose for which Jatinder
     use it. For each device, give an advantage of this compared to non-electronic methods.

For
iner's

Digital camera

Use ....

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Advantage ....

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Satellite Navigation system

Use ....

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Advantage ....

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PDA

Use ....

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Advantage ....

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Laptop

Use ....

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Advantage ....

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[Turn over

2 **(a)** Describe the use of PINs in the setting up of a phone conference.

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(b) Give **two** disadvantages of phone conferencing compared to video-conferencing.

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3 (a) There are three types of advertising; business, product and service advertising.

Name and describe a type of advertising that could be used to promote th... Corporation.

Name ....

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Description ....

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(b) Give **three** advantages of using posters to advertise rather than the Internet.

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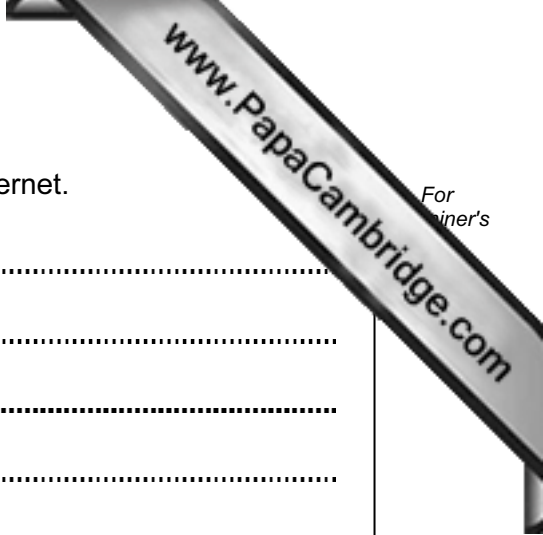
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(c) Give **three** disadvantages of using posters rather than the Internet.

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Scenario 2
Questions 4, 5 and 6

Maharashtra Fashions is a very large mail order catalogue company which sells a variety of
clothes.

Vikram, the owner, has decided to computerise the company's operations. He has employed
Fabio, a systems analyst, to supervise the process.

Fabio has completed the analysis stage. He now knows that customer orders come into the
company and that invoices are produced.

To start his design he will:

* use a systems flowchart
* choose software for the new system
* design a hard copy data collection form so that data can be collected from the existing
  documents before transferring it to the computerised system.

He will then create a relational database.

Vikram is going to open a call centre so that customers can phone in their orders.

[Turn over

4 (a) Using examples from the scenario describe **four** components of a systems flowchart.

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(b) Describe **three** benefits of off-the-shelf software.

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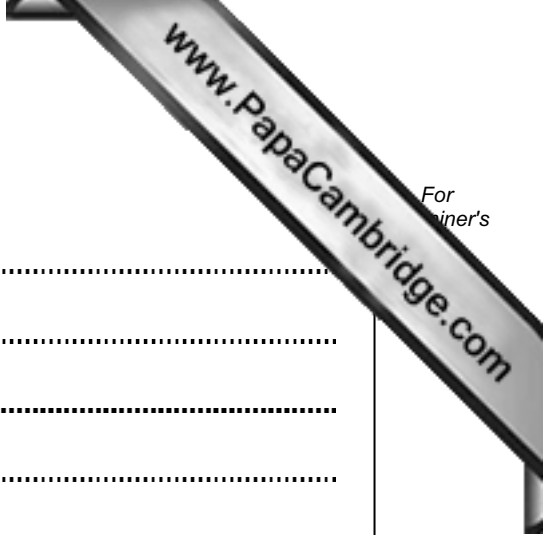
(c) Describe **two** benefits of purpose-built software.

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[Turn over

5 (a) Describe **five** features of a well designed paper-based data collection form.

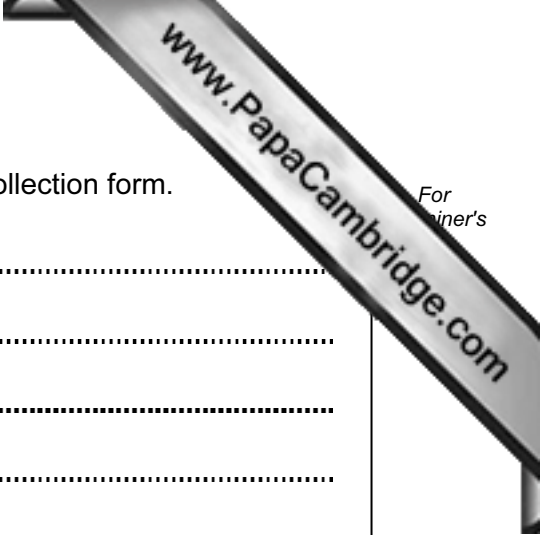1 ....

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(b) Describe **three** features which could be found in a screen form but would not be found on a paper-based form.

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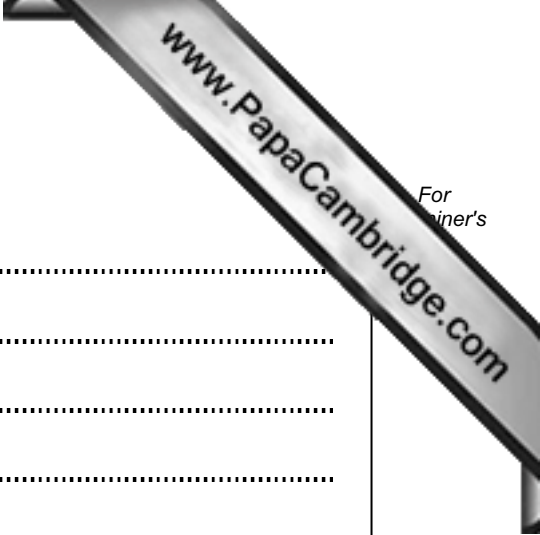.. [3]

For
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(c) Describe how a relational database would be created.

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6 (a) Describe the use of **three** different items of ICT hardware which each telephony operator at the call centre would need.

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[Turn over

For
iner's
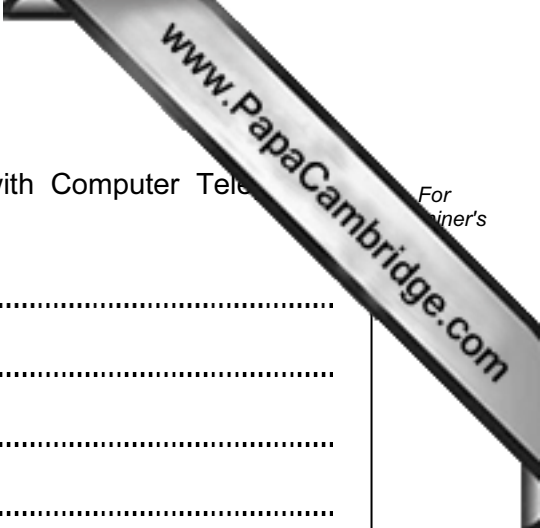
(b) Name and describe the **two** types of call control used with Computer Tele
Integration (CTI) software.

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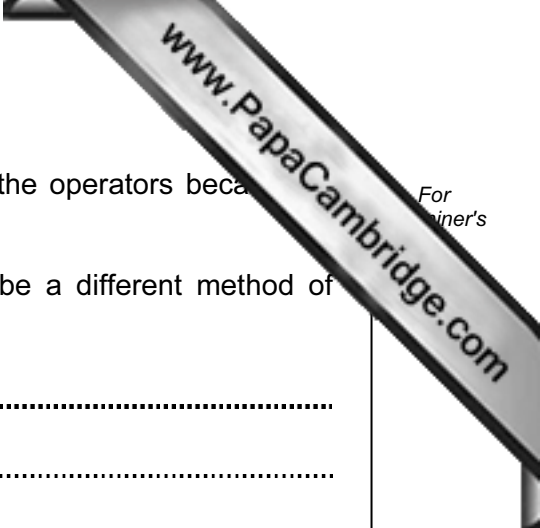.. [3]

(c) There are a number of health problems which could affect the operators because of their use of computers.

Name **four different** health problems and for each, describe a different method of prevention of the problem.

Problem 1 ....

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Problem 2 ....

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Problem 3 ....

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Problem 4 ....

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[Turn over

Scenario 3
Questions 7, 8 and 9

Joan is the headteacher of a school in Lagos. She wants to increase the use of ICT in testing student achievement.
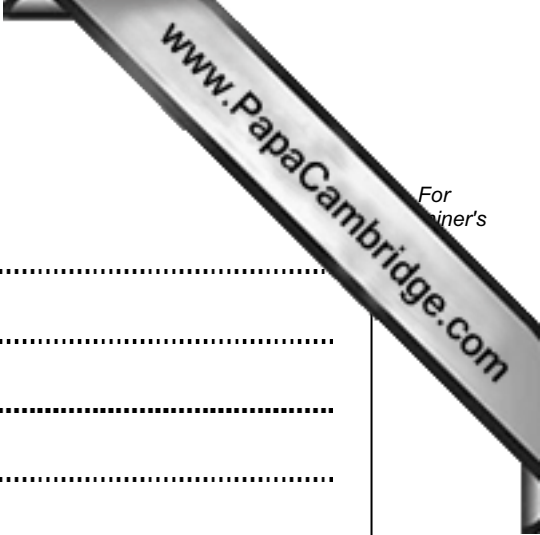
She asked Safina, a systems analyst, to research the current methods of assessing students' work and to create a computer system which would help in the process.

Safina has now developed a system using a database which will store the students' test scores. As she felt that the current system was so outdated she decided to implement the system using the direct changeover method.

In the initial version, the 'student score' master file was in an unordered sequential format. The latest version stores the scores in an ordered sequential format.

As each student is tested, the scores are recorded on a transaction file.

Safina has also produced technical documentation to go with the system.

7 (a) Describe how ICT could be used to carry out student assessment within the school.

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(b) Describe **two** differences between an ordered sequential file and an unordered sequential file.

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[Turn over

(c) Describe **four** drawbacks of using sequential files.

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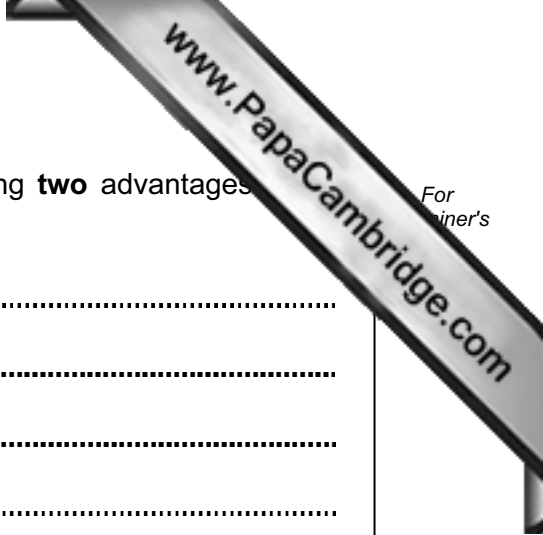
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(d) Explain how the transaction file must be prepared for use with the master file.

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8 Describe the direct changeover method of implementation, giving **two** advantages compared with parallel running.
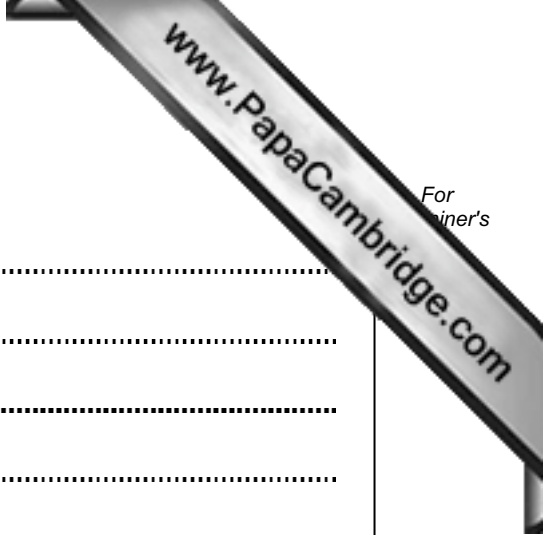
Description ....

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Advantage 1 ....

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Advantage 2 ....

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[Turn over

9 **(a)** Give **two** reasons why **technical** documentation is needed.

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(b) Describe **six** items that would be included in technical documentation.

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