UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Advanced Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

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

Paper 3 **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

Kamran runs a small supermarket which includes an internet café in Islamabad. He is going to expand the business and needs to replace manual tills with EFTPOS terminals. These terminals will be networked together with computers used for administration.

He uses a stock control program to help him manage his business.

1 (a) Describe **four** items of information about a product held by the stock control syst

Item 1 ....

....

....

Item 2 ....

....

....

Item 3 ....

....

....

Item 4 ....

....

.... [4]

(b) Describe **three** ways that a stock control program will help Kamran in manag[...] business.

Way 1 ....

....

....

....

....

Way 2 ....

....

....

....

....

Way 3 ....

....

....

....

.... [6]
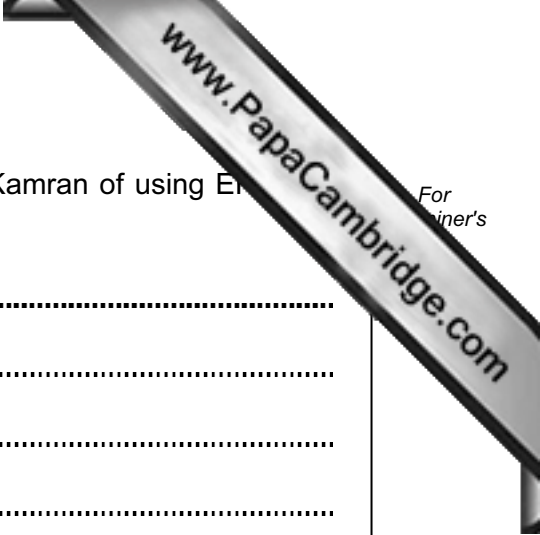
(c) Other than controlling the stock, describe **three** benefits to Kamran of using E[POS] terminals rather than using manual tills.

Benefit 1 ....

....

....

....

....

Benefit 2 ....

....

....

....

....

Benefit 3 ....

....

....

....

.... [6]

For
iner's

2 The computers in the internet café need to be connected to the main server.

   (a) Kamran is considering using WiFi.

   Give **three** advantages of using WiFi rather than cables to connect these computers.

   1 ....

   ....

   ....

   2 ....

   ....

   ....

   3 ....

   ....

   .... [3]

   (b) Give **three** disadvantages of using WiFi rather than cables to connect these computers.

   1 ....

   ....

   ....

   2 ....

   ....

   ....

   3 ....

   ....

   .... [3]
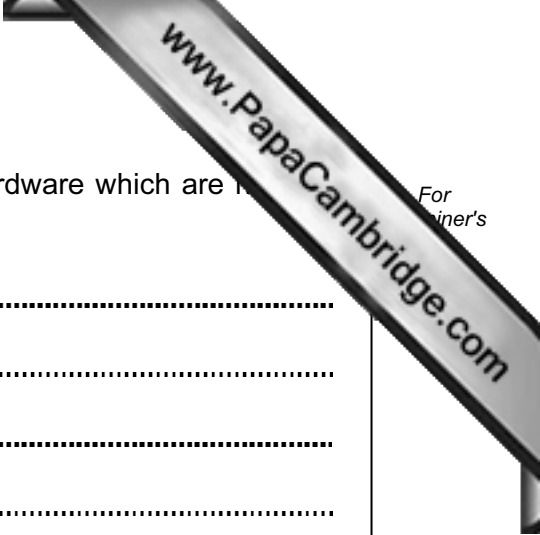
(c) Describe, including their uses, **three** items of networking hardware which are i̶ so that the computers can be connected wirelessly.

Item 1 ....

....

....

Use ....

....

....

Item 2 ....

....

....

Use ....

....

....

Item 3 ....

....

....

Use ....

....

.... [6]

(d) Explain what is meant by the following computer terms used when access... internet.

URL ....

....

....

....

....

HTML ....

....

....

....

                                                                                                                    [4]

(e) Name and describe **two** protocols that computers could use over the internet.

1 ....

....

....

....

....

2 ....

....

....

....

                                                                                                                    [4]

For
...iner's

Scenario 2
Questions 3 and 4

The botany department of a university has recently discovered a number of rare plants in a remote region of the country.

The department wants to use ICT to monitor the weather conditions in the region where the plants were found.

They will need an expert system to help classify the rare plants.

3   Describe in detail **five** sensors that will be used in a weather monitoring system.

1   ....

....

....

2   ....

....

....

3   ....

....

....

4   ....

....

....

5   ....

....

.... [5]

4 Explain the role of the following in an expert system.

(a) Knowledge engineer ....

....

....

....

....

....

....

....

....

.... [4]

(b) Inference engine ....

....

....

....

....

....

....

....

....

.... [4]

Scenario 3
Questions 5 and 6

Jamestown District Council have employed an architect to design a new assembly hall. The architect will use computer modelling to show her ideas to the council.

The council will put information about the new assembly hall onto its website so that members of the public can see the designs and make comments.

As members of the public can access and download the information, the council is concerned about the security of the website.

5   (a) Discuss **four** actions that a hacker might take when attempting to breach the s[   ]
of the website and for each one state how it can be prevented.

1 ....

....

....

....

....

2 ....

....

....

....

....

3 ....

....

....

....

....

4 ....

....

....

....

.... [8]

(b) Describe how the information could be put on the site so that it can be downloaded. Include in your description any storage media that could be used.

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [5]

6 Describe, using examples, how the following **two** computer models could be used architect in a presentation to the full council about the new assembly hall.

(a) Financial model

....

....

....

....

....

....

....

....

.... [3]

(b) CAD model

....

....

....

....

....

....

....

....

.... [3]

Scenario 4
Question 7

Joe is a disabled person living in Chicago. His hobby is stamp collecting and he enjoys using online auctions for the buying and selling of stamps.

For
iner's

7 **(a)** Explain how the use of ICT will improve his access to the following:

(i) Booking a theatre ticket

....

....

....

....

....

.... [2]

(ii) Employment

....

....

....

....

....

.... [2]

(iii) Health care

....

....

....

....

....

.... [2]

(b) There are a number of problems associated with online auctions.

Describe in detail how these could be overcome.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [6]

BLANK PAGE

BLANK PAGE