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　　　　　　　　　　　　　　　　　　　　　　　**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 **14** printed pages and **2** blank pages.

UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

Scenario 1
Questions 1 to 5

Farm-ware is a company that manufactures and sells farm tools such as spades and forks.

Mai is the project manager who is overseeing the development of new CAD software that will be used to design a new range of farm tools.

The software engineers who are creating the new CAD software work in different parts of the world.

Mai uses VoIP to keep in contact with each of the software engineers.

Mai also uses video-conferencing to hold group meetings with all of his software engineers because a face-to-face meeting would require the engineers to travel by air to a central venue.

The company sells the tools through stores around the world. It supplies the stores from a central warehouse.

The company has a computer network which hosts the company website, the warehouse stock control system and the stock database.

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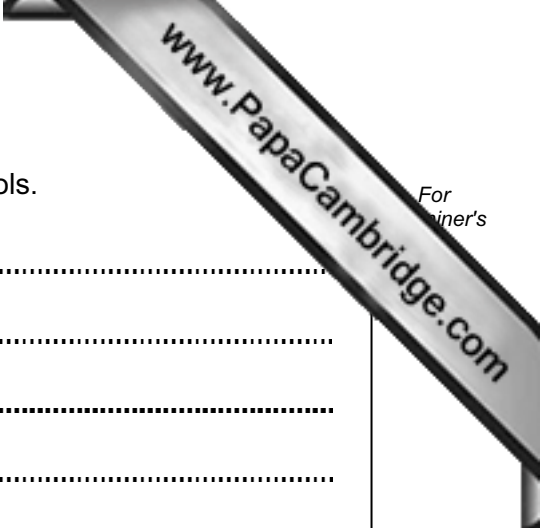
1 (a) (i) Describe **four** benefits of using CAD in designing farm tools.

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(ii) Describe the use of **one** specialist input device and of **one** specialist output device used in CAD when designing the farm tools.

Input device ....

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Output device ....

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[Turn over

(b) Describe **six** ways Mai would use a project management approach to plan and manage the development of the new CAD software.

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2 (a) (i) Describe what is meant by VoIP.

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(ii) Describe **four** features of VoIP that would make it suitable for use by Mai to contact his engineers.

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(b) Describe how video-conferencing software enables group meetings to take place.

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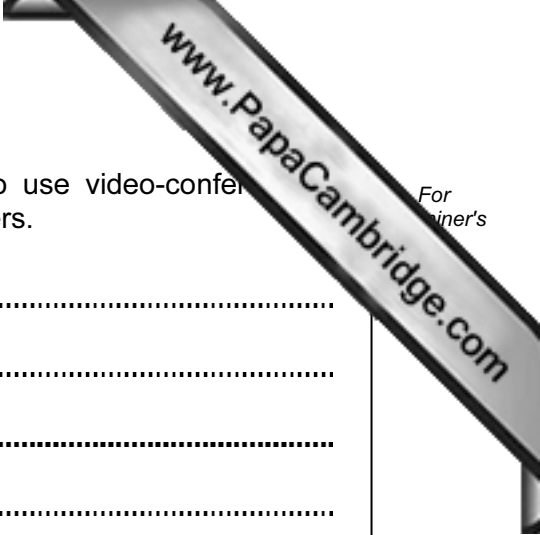
(c) Give **four** recent developments which have caused Mai to use video-confe[rencing] rather than have a face-to-face meeting with all of his engineers.

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3 **(a)** Describe **two** methods of automatic data capture used by the warehouse stock system.

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(b) Describe the processing that takes place in the warehouse's automatic stock control system when goods are sent to stores or received from the factory. Indicate which fields in the database would change during this process.

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[Turn over

4   Explain how each of the following would be used on the company network.

   (a) server

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   (b) router

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   (c) network card

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   (d) wireless access point

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   (e) VPN

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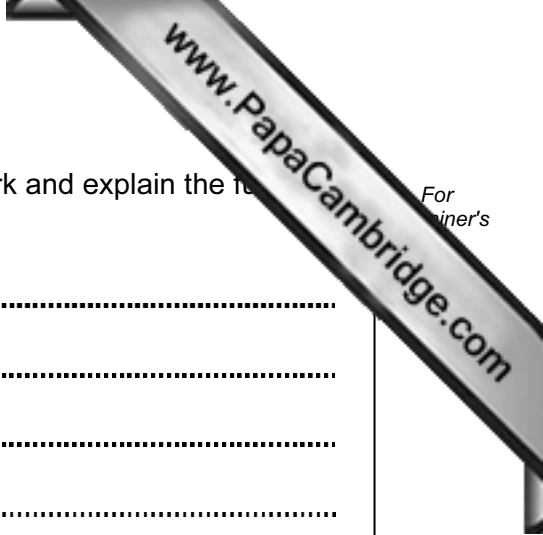
5 Identify **four** protocols that would be used on the company network and explain the function of each.

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[Turn over

Scenario 2
Questions 6 and 7

Transcorporation TV is a television channel that broadcasts weather reports and forecasts via satellite.

Transcorporation TV uses weather satellites and weather stations to collect data.

Transcorporation TV uses ICT to collect, store, and analyse the data. ICT is used to produce reports for use by the TV channel's weather forecasters in their broadcasts.
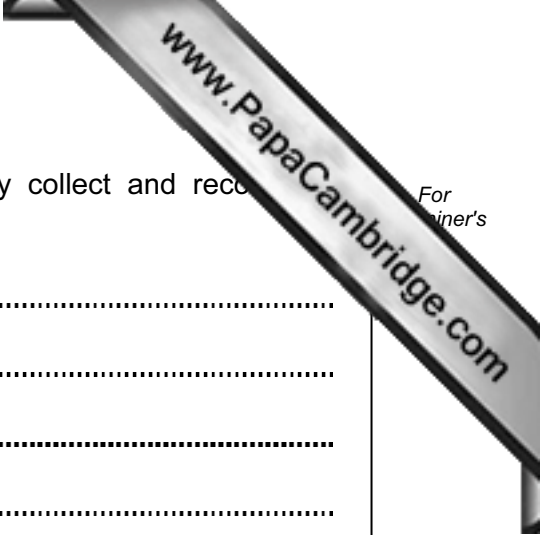
6 (a) Describe **four** ways in which ICT is used to automatically collect and record weather data.

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(b) Describe **three** ways in which ICT is used to analyse and present the weather data.

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[Turn over

7 **(a)** Describe how television programmes are transmitted from the television station viewer's satellite receiver box to be processed for display on the TV set.

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(b) Explain why some viewers may not be able to see the programmes even though they are being received by their satellite receiver box.

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Scenario 3
Question 8

Trefor is considering replacing his television set with a home entertainment system connected to his personal computer.

He wants to view television programmes and listen to music. He also wants to view videos and listen to music downloaded from the Internet but is worried about the possibility of viruses affecting his computer system.

To try and protect his system he will install and use anti-virus software.

[Turn over

8 (a) Explain what a computer virus is and how a virus might cause damage to computer system.

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(b) Describe how anti-virus software would detect viruses.

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(c) Describe **three** media sources that the entertainment system could use to play music to Trefor.

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