GCE A level

1647/01

APPLIED INFORMATION & COMMUNICATION TECHNOLOGY

UNIT AICT7 – Part A

eConnect

Networking Principles, Design and Management

Paper version of on-screen assessment

P.M. TUESDAY, 11 June 2013

1 hour

Examiner only

Total Mark (PART A only)	

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

INFORMATION FOR CANDIDATES

Questions in this paper are based on the context of *Gwesty'r Pentref*.

The exam consists of two parts:

Time allowed for Part A: 1 hour

- The Tender (40 marks)

Time allowed for Part B: 2 hours

- The Recommendation (20 marks)
- The Implementation (40 marks)

A short break is permitted between parts A and B.

Quality of Written Communication will be assessed in the response to Question 7.

AM*(S13-1647-01)

INTRODUCTION

Gwesty'r Pentref

INVITATION TO TENDER

Gwesty'r Pentref is a hotel on the outskirts of a city. The hotel is expanding to include extra facilities for their guests and to attract day visitors.

There will be new buildings for a:

- Restaurant
- Health Club
- Fitness Centre

Hotel rooms can be booked and guest bills printed at the Hotel Reception.

Hotel guests or visitors will be able to eat at the Restaurant, have a beauty treatment at the Health Club and a fitness session at the Fitness Centre.

Gwesty'r Pentref has decided to obtain tenders for the contract to design and install a network system to enable electronic communication between the existing hotel and the new buildings.

As an IT consultant specialising in network solutions you have been invited to tender for this contract and have this opportunity to demonstrate your subject expertise by completing a number of tasks.
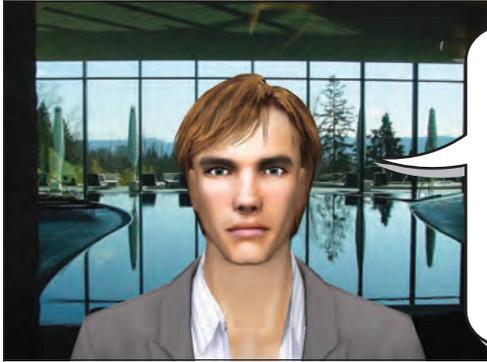
"Hello, I am the manager of Gwesty'r Pentref. I would like you to clarify with practical examples some of the advantages of using networked computers compared with stand alone computers."

1. *(a)* Briefly describe why using networked computers makes efficient use of hardware. [1]

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(b) Identify an activity that could be monitored using the network management software.
[1]

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(c) Describe how using a client server network can improve the safety and security of data.
[2]

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(d) Describe how using a network enables collaborative working. [2]

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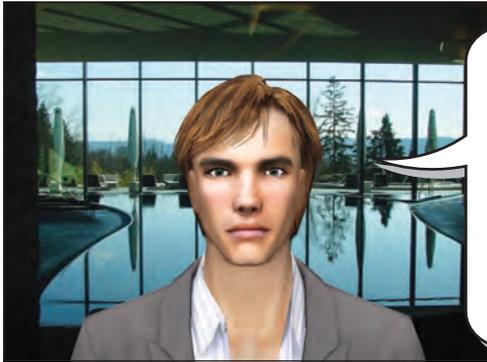
"Hello again. I want my staff to contact guests using email instead of sending letters in the post. We will require an Acceptable Use Policy which should include rules about writing emails."

2. Many organisations have an Acceptable Use Policy (AUP) which includes rules about using their networks and writing emails.

(a) One rule often included is '*Always read your emails before you send*'. Explain why this is a sensible rule. [1]

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(b) Write **two** other rules the organisation should include in their AUP, explaining why they are required. [4]

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From:	*The Manager*
To:	*Candidate*
Sent:	Today
Subject:	The Internet and an intranet

Hello.

I would like to know more about the difference between the Internet and an intranet.

Thanks
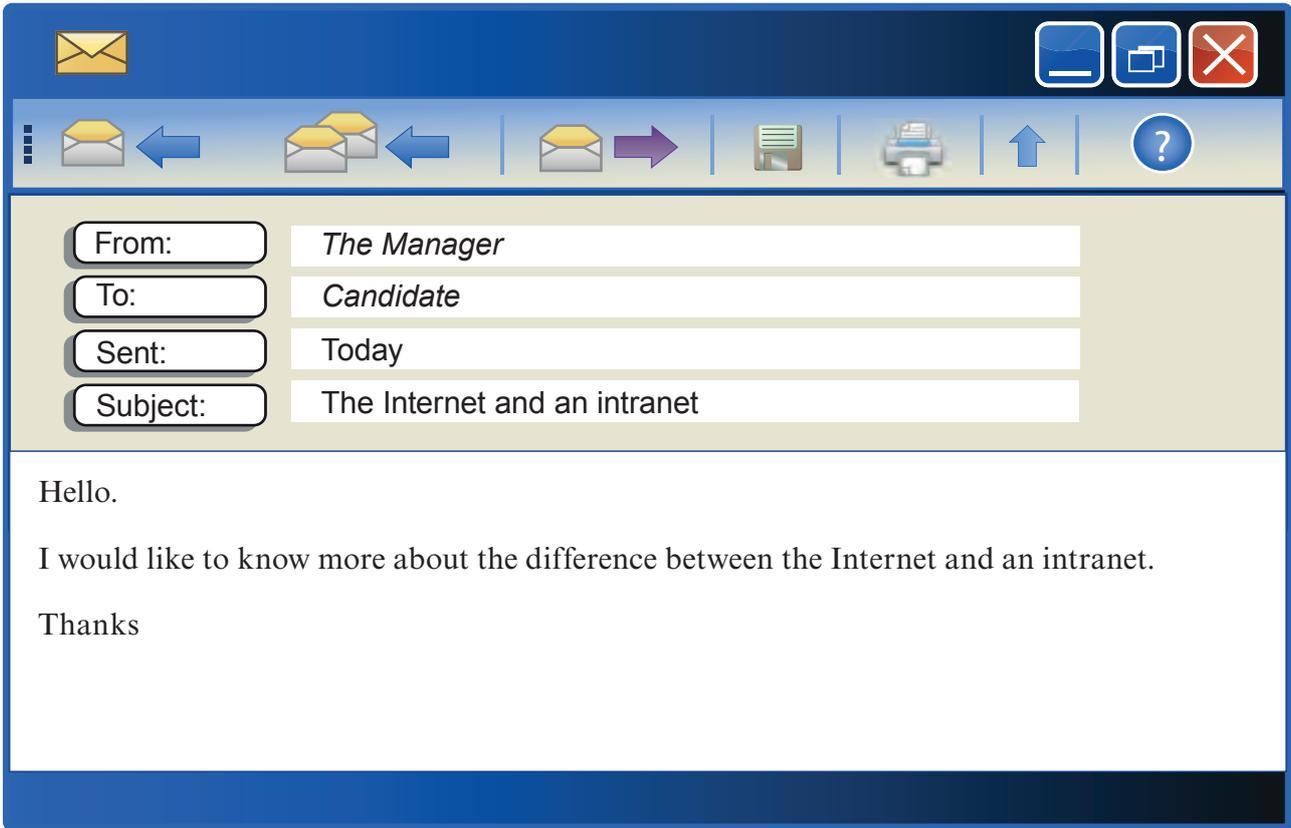
3. *Gwesty'r Pentref* will be creating an intranet and developing a website. Describe the difference between the Internet and an intranet. Give **two** examples of the type of information that could be found on their website and **two** examples of the type of information that should be accessed from their intranet. [4]

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From: *The Manager*

To: *Candidate*

Sent: Today

Subject: Network hardware

Hello.

I appreciate that designing our network will involve selecting hardware and I would like your advice on this.

Thanks
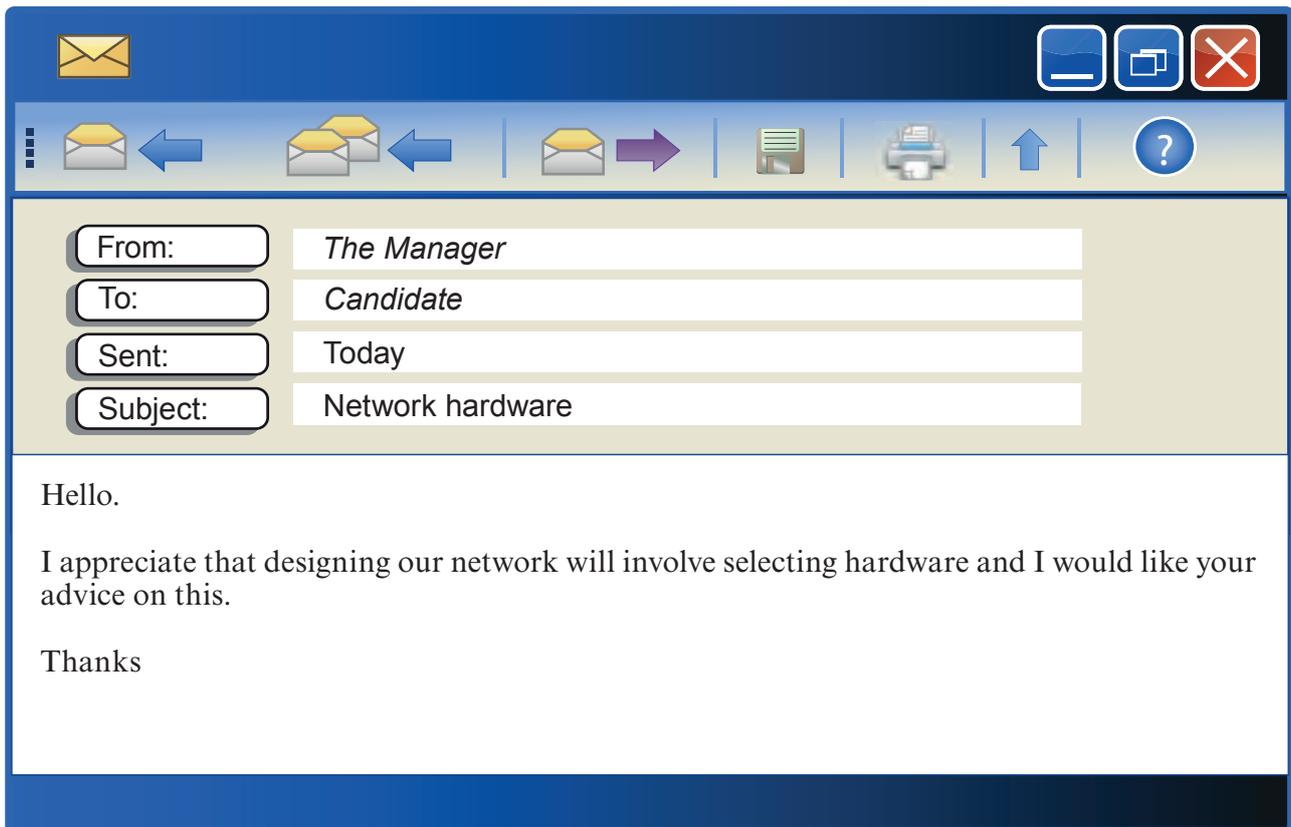
4. Identify the function of the hardware devices named below.

(a) Repeater. [1]

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(b) Wireless Access Point. [1]

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(c) Media converter. [1]

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From: *The Manager*

To: *Candidate*

Sent: Today

Subject: Communication protocols

Hello again.

I understand that communication protocols will need to be considered when designing our network and would like your advice on this.

Thanks
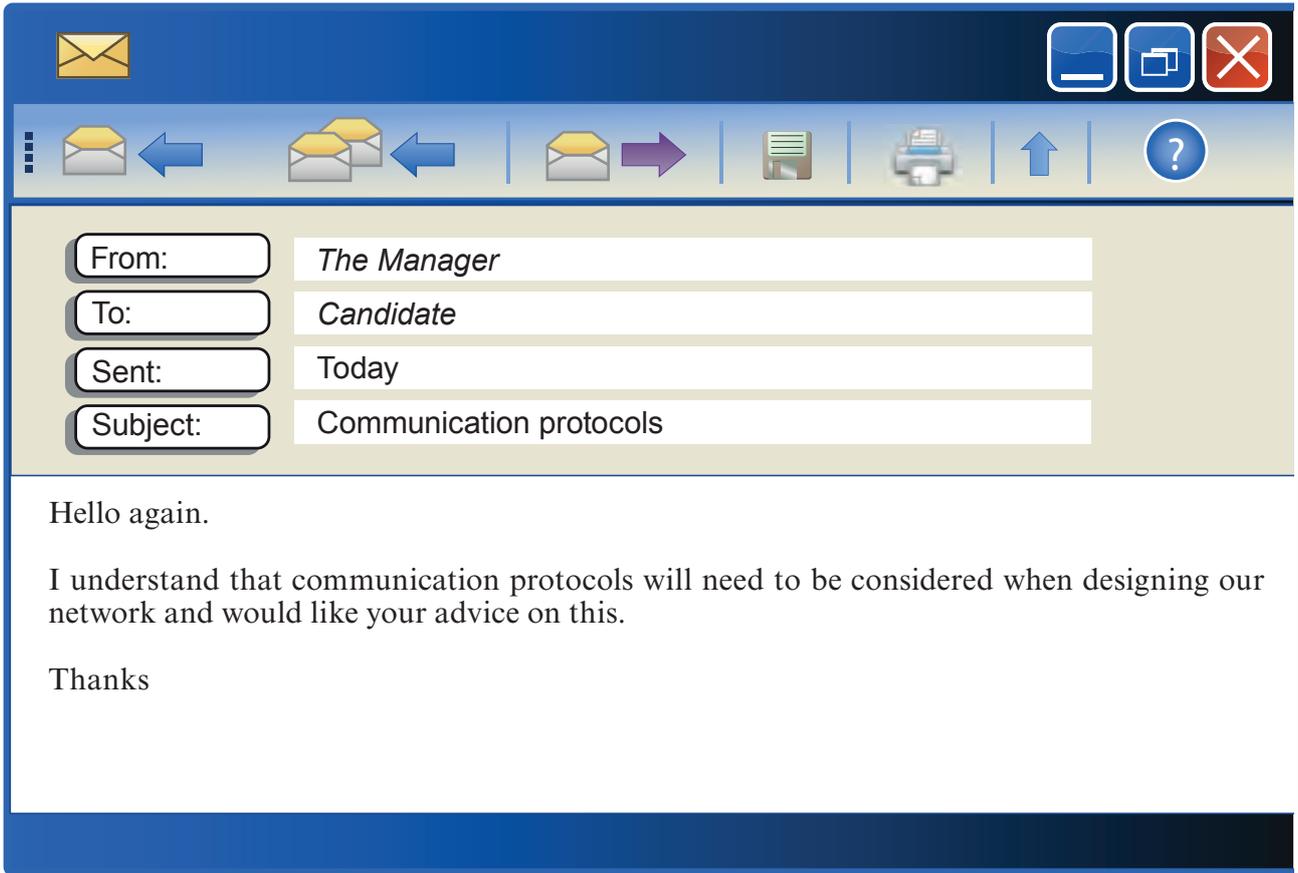
5. Name **four** networking protocols, briefly describing a suitable use of **each**. [4]

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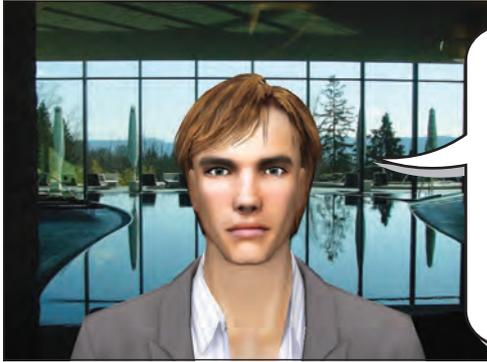
"I understand that buying and maintaining hardware for our network will be a major expense so I would like you to provide more information about the type of workstations and servers required."

6. *(a)* The organisation could install a thin client network. Describe in detail why thin client workstations have lower running costs compared with standard workstations. [3]

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(b) Describe in detail **one** specific role of a file server. [2]

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(c) Describe in detail **one** specific role of an Internet (proxy) server when dealing with client requests for web pages. [2]

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7. Wide area networks can use packet switching or circuit switching. Explain **in detail** how packet switching operates, including a description of the contents of a typical packet and the advantages of packet switching compared with circuit switching. [11]

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