OCR
RECOGNISING ACHIEVEMENT

Wednesday 25 January 2012 – Morning

A2 GCE
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

G055/01   Networking Solutions

Candidates answer on the Question Paper.

OCR supplied materials:
* Instructions for Candidates G055/01/IC (inserted)

Other materials required:
* Candidate's pre-prepared materials

Duration: 1 hour 30 minutes

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

* The Insert will be found in the centre of this document.
* Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
* Use black ink. HB pencil may be used for graphs and diagrams only.
* Answer **all** the questions.
* Read each question carefully. Make sure you know what you have to do before starting your answer.
* Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
* Attach your pre-prepared materials for tasks 1–3.
* Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

* The number of marks is given in brackets **[ ]** at the end of each question or part question.
* The total number of marks for this paper is **100**.
* No marks will be given for using brand names of software packages or hardware.
* The quality of your written communication will be assessed through Q4 and Q7.
* This document consists of **12** pages. Any blank pages are indicated.

For Examiner's Use		Max
Task 2		21
Task 3		9
1		6
2		5
3		6
4		10
5		6
6		8
7		9
8		2
9		4
10		4
11		4
12		6
Total		100

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Turn over

Section A

These questions refer to the Green Toes case study.

1   Describe **three** financial costs to Green Toes associated with the new network.

    1 ....

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    2 ....

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    3 ....

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    .... **[6]**

2 A possible topology for the network at Green Toes is a logical bus network as shown in Fig. 1.

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[Computer]          [Computer]          [Server]
     |                   |                  |
─────┴──────────┬───────┴────────┬─────────┴──────
          [Computer]        [Printer]
```
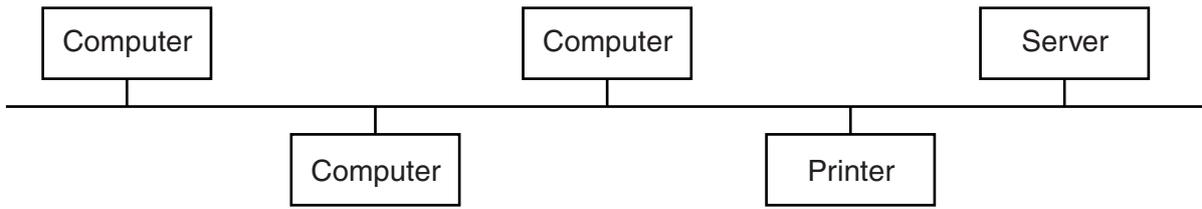
Fig. 1

(a) Describe **one** benefit to Green Toes of installing a logical bus network.

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.... **[2]**

(b) Mr Greensdale has decided **not** to use a logical bus network.

Explain **one** possible reason for this.

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.... **[3]**

3 The webmaster at Green Toes will develop and maintain the company's website.

Identify **two** types of software the webmaster could use. Explain how each could be used to develop and maintain the website.

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.... **[6]**

4 All computers at Green Toes will need access to a shared printer. There are two possible methods of achieving this.

Evaluate the suitability of these methods for the Green Toes network.

The quality of written communication will be assessed in your answer to this question.

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.... **[10]**

5 Mr Greensdale is considering introducing an intranet for the employees of Green Toes.

(a) Identify **two** advantages and **one** disadvantage of introducing an intranet.

Advantage 1 ....

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Advantage 2 ....

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Disadvantage ....

.... **[3]**

(b) Identify **one** piece of hardware required to host the intranet at Green Toes and describe its role.

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.... **[3]**

6 The Green Toes network will be connected to the internet. One benefit of this is access to internet services.

Identify **two** internet services and describe how Green Toes could use each service.

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.... **[8]**

7 Mr Greensdale is concerned about the security of the Green Toes network.

Discuss actions that the company should take to maintain the security of its network.

You should consider both physical and logical security.

The quality of written communication will be assessed in your answer to this question.

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Section B

You do not need the case study or your tasks to answer these questions.

8 Computers can connect to a LAN through a network interface card.

Identify **two** tasks carried out by a network interface card.

1 ....

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2 ....

.... **[2]**

9 (a) Define the term VLAN (Virtual Local Area Network)

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.... **[1]**

(b) Describe how a company could set up a VLAN to create three separate networks with 14 computers in each network.

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.... **[3]**

Turn over

10 A company wants to connect its network between two buildings on a large industrial site where there is a lot of noisy electrical equipment.

Explain **two** features of fibre optic transmission that make it suitable for this application.

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2 ....

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.... **[4]**

11 A network could be connected using 100BaseT (Ethernet) technology.

Describe **two** features of the Ethernet standard for 100BaseT.

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.... **[4]**

12 Two protocols needed to access internet services are FTP and TCP.

Describe each of these protocols.

FTP ....

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TCP ....

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.... **[6]**

END OF QUESTION PAPER

PLEASE DO NOT WRITE ON THIS PAGE