



Tuesday 17 June 2014 – Morning

**A2 GCE
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

G055/01 Networking Solutions

Candidates answer on the Question Paper.

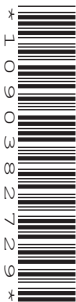
OCR supplied materials:

- Instructions for Candidates G055/01/IC (inserted)

Other materials required:

- Candidate's pre-prepared materials

Duration: 1 hour 30 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- The Insert will be found inside 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 Q8 and Q13.
- This document consists of **12** pages. Any blank pages are indicated.

For Examiner's Use		Max
Task 2		21
Task 3		9
1		3
2		4
3		4
4		9
5		8
6		7
7		6
8		9
9		2
10		2
11		2
12		5
13		9
Total		100

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SECTION A

These questions refer to the OES case study.

- 1 The new network will allow OES staff and students to communicate more effectively.

Describe **one** facility that will be available on the network to make it easy for staff to exchange important information quickly with all students.

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..... [3]

- 2 The OES network will be connected to the internet so that students can access interactive websites. OES will need a broadband connection with the widest available bandwidth.

Explain **two** benefits of having the widest available bandwidth for the OES broadband connection.

1

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2

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..... [4]

3 OES students will need to be able to access a range of interactive websites and read PDF files.

Describe **two** types of software that are free to download that students may need to use to be able to access these resources.

1

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[4]

4 A tree topology has been recommended for the OES network. An alternative topology is a star.

(a) Explain **two** benefits of a **star** topology to OES.

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[4]

(b) (i) Explain **one limitation** of a **tree** topology to OES.

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[2]

(ii) Justify the choice of a **tree** topology for this network.

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..... [3]

5 OES will have an internal web server to host their online courses.

(a) Describe **two** data security issues that could affect the web server.

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..... [4]

(b) Explain **two** security precautions that OES can take to protect the data on the web server.

1
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..... [4]

6 OES will have a proxy server in its new network.

(a) Explain the role of the proxy server and where it is situated in the network.

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(b) Explain **two** functions the proxy server will perform to deal with students' requests for data from the internet.

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7 Many areas of the OES building have high levels of public access.

Explain **two** measures the company can take to minimise the risk of theft of its network equipment.

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2

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[6]

SECTION B

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

9 Networks use a variety of addressing types to allow communication at different levels.

State **two** characteristics of IP addressing.

1

2

[2]

10 Describe **one** difference between a router and a switch.

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[2]

11 Explain **one** purpose of an application server within a network.

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[2]

12 A network technician will often make reference to a problem log.

(a) Identify **three** items of information contained in a problem log.

- 1
- 2
- 3 [3]

(b) Explain the main purpose of a problem log.

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..... [2]

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