

Tuesday 11 June 2013 – Afternoon

**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 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 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		4
2		6
3		8
4		6
5		3
6		9
7		5
8		9
9		2
10		3
11		3
12		4
13		8
Total		100

SECTION A

These questions refer to the Orca Graphic Designs Ltd (OGD) case study.

1 All users of the OGD network will have access to the internet and will be able to use this for communication.

(a) Explain **one** advantage to OGD of having a network that allows communication over the internet.

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..... [2]

(b) Explain **one disadvantage** to OGD of allowing communication over the internet through its network.

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..... [2]

- 2 Mrs Baleen could choose to implement a client-server network. This would have at least one server performing a particular function.

Describe the function of each of the following servers within the OGD network.

File server

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Proxy server

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[6]

3 One topology that OGD could choose for its network is a tree topology.

(a) Draw a **logical** tree topology diagram to show the network as it would be implemented at OGD.

[6]

(b) Describe **one** advantage of using a tree topology for the network at OGD.

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..... [2]

4 All computers and printers in the barns will need to be connected to the network in the old farmhouse.

(i) Identify the transmission media that could be used to make a reliable connection between the barns and the old farmhouse.

..... [1]

(ii) Describe **one** feature of this type of transmission media.

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..... [2]

(iii) Explain why this type of transmission media is suitable for the outside connections in the OGD network.

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..... [3]

5 The Information Officer, Mr Cachalot, updates the company’s website weekly. He uploads new and changed web pages to the company’s web host.

Identify **and** describe **one** type of software Mr Cachalot needs for this task.

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..... [3]

6 Freelance Designers will supply their own computer equipment. OGD will provide workstation furniture and electrical and network sockets.

Explain **three** considerations that must be taken into account when designing workstation areas for the Freelance Designers.

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[9]

7 Graphic Designers save all their artwork centrally on the network.

Explain how this artwork can be kept safe from loss.

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..... [5]

8

- 8 The employees of OGD will be able to access their work and the company's library of artwork remotely using VPN software.

Discuss the different security measures OGD could use to protect the company network when employees access the network remotely.

Marks will be awarded for the quality of written communication in your answer.

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SECTION B

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

9 Describe **one** item contained in an IP header.

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..... [2]

10 Networks often use subnet addressing to separate sets of IP addresses for hosts in different parts of the network.

(a) Give the subnet mask used to separate out a set of up to 253 hosts in each section of a company network.

..... [1]

(b) Describe **one** advantage of using subnet addressing for a network.

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..... [2]

11 Explain the purpose of the HTTP protocol as used in browser software.

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..... [3]

12 In a wide area network (WAN), data is transmitted in packets. Each transmitted packet has a header attached containing information about the packet.

Describe **two** of the fields in a typical packet header.

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..... [4]

PLEASE DO NOT WRITE ON THIS PAGE



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