

Tuesday 29 January 2013 – 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 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 Q12.
- 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		3
3		8
4		6
5		3
6		9
7		8
8		9
9		4
10		3
11		4
12		9
Total		100

SECTION A

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

1 The OGD network will include a central storage device, which will store and allow access to the artwork library currently stored on DVD.

(a) Describe **one** advantage of using a network for this purpose.

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.....
..... [2]

(b) Describe **one disadvantage** to OGD of having central storage and access to their artwork library.

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.....
..... [2]

2 Mrs Baleen could choose a separate peer-to-peer network for the Freelance Designers, with access to a local printer and an internet connection.

Explain **one** reason why Mrs Baleen might choose to implement a peer-to-peer network for the Freelance Designers.

.....
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.....
.....
..... [3]

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

(a) Draw a **logical** star topology diagram to represent the **whole** network at OGD.

[6]

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

.....

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..... [2]

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

(i) Identify the transmission media that could be used to connect computers and printers within 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 network at OGD.

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..... [3]

5 Graphic Designers and Freelance Designers at OGD will need to be able to view information on the WWW.

Identify and describe the type of software that will be required to allow them to do this.

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..... [3]

6 The Freelance Designers will have internet access.

Describe **three** WAN services available to them.

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[9]

7 Users of the OGD network will have access to a printer in the room in which they work.

(a) (i) Identify **one** method that can be used to allow printers to be shared between network users.

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..... [1]

(ii) Describe how the network would be set up to use this method.

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..... [3]

(b) Explain **two** benefits of printer sharing for the Freelance Designers.

1
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[4]

SECTION B

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

9 All computers connected to the internet will need to be allocated an IP address.

(a) What is an IP address?

.....
..... [1]

(b) Give an example of an IP address.

..... [1]

(c) IP addresses are organised into classes so that organisations can be given a set of IP addresses rather than many random addresses.

(i) Identify the most appropriate IP address class for a small to medium-sized organisation with a network of around 200 individual hosts.

..... [1]

(ii) Give an example of an IP address in this class.

..... [1]

10 Data transfer on the internet is carried out using the File Transfer Protocol (FTP).

Describe this protocol.

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..... [3]

11 Describe **two** features of fibre optic cable.

1

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2

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[4]

Question 12 begins on page 10

11
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