

**ADVANCED GCE**

**APPLIED INFORMATION AND COMMUNICATION  
TECHNOLOGY**

**G055**

Networking Solutions

Candidates answer on the question paper.

**OCR supplied materials:**

- Instructions for Candidates G055/IC (inserted)

**Other materials required:**

- Candidate's pre-prepared materials

**Thursday 23 June 2011  
Morning**

**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. Pencil may be used for graphs and diagrams only.
- 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).
- Answer **all** the questions.
- 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 Q5(b) 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		6
3		6
4		2
5		13
6		4
7		10
8		3
9		3
10		2
11		5
12		2
13		11
<b>Total</b>		<b>100</b>

**Section A**

**These questions refer to the Recycled Garden Company Ltd case study.**

**1** Identify **one** facility of email and explain how RGC could use this facility.

.....

.....

.....

.....

.....

..... [3]

**2** Explain **two** potential drawbacks for RGC, other than loss of security, associated with introducing a network.

Drawback 1 .....

.....

.....

.....

.....

.....

Drawback 2 .....

.....

.....

.....

.....

.....

..... [6]

- 3 Explain the benefits for the designers/engineers at RGC of having access to each of the following WAN services:

Discussion forums

.....  
.....  
.....  
.....  
.....  
.....

Data file exchange

.....  
.....  
.....  
.....  
.....  
..... [6]

- 4 Describe **one** way that RGC can protect the security of its data in case of technical failure.

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

5 RGC can choose to implement a peer-to-peer network or a client-server network.

(a) Explain the terms 'peer-to-peer' and 'client-server' with reference to local area networks.

Peer-to-peer .....

.....

.....

.....

.....

Client-server .....

.....

.....

.....

.....

[4]



7 RGC will use a star network that will have a 48-port switch at its centre.

(a) Describe **two** functions of the switch

Function 1 .....

.....  
.....  
.....

Function 2 .....

.....  
.....  
..... [4]

(b) Explain why this switch is more suitable for RGC's network than a hub or smaller switch.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [6]

8 Identify the hardware required to allow a broadband internet connection to be shared throughout the RGC network and describe how it is used.

.....

.....

.....

.....

.....

..... [3]

9 Identify **one** service available to RGC that would allow employees to access confidential information while away from the office. Describe how this service would be used by RGC.

.....

.....

.....

.....

.....

..... [3]

**Section B**

**These questions DO NOT refer to the case study.**

**10** Describe **one** advantage to a company of choosing broadband for the connection between its network and the internet.

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

**11** Explain what a problem log is and how it can be used to help identify recurring problems within a network.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [5]

**12** When a network is installed, measures must be taken to reduce the risk of electrocution.

Explain **one** of these measures.

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



- 13** Evaluate the use of a mesh topology for a small network of 20 computers.

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

[11]

**END OF QUESTION PAPER**

**10**  
**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

11  
BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

**PLEASE DO NOT WRITE ON THIS PAGE**



**Copyright Information**

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.