

Tuesday 23 June 2015 – 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 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 Q6 and Q10.
- This document consists of **12** pages. Any blank pages are indicated.

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

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

SECTION A

These questions refer to the Ocean Rentals Agency (ORA) network case study.

1 All users of the ORA network will have access to the network and its services from a variety of locations.

(a) Explain **two** services provided by the network that will help to improve communication between agents and clients.

1

.....

.....

.....

.....

.....

.....

.....

.....

2

.....

.....

.....

.....

.....

.....

.....

.....

[6]

(b) The network will be a client-server network.

Explain how this will help ORA to keep its software and data on all devices secure and up to date.

.....

.....

.....

.....

.....

.....

.....

.....

.....

[3]

2 ORA rental agents will be transferring documents to the servers on the network from a variety of remote locations.

(a) Describe **one** disadvantage to ORA of handling important documents in this way.

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

(b) Describe how VPN technology can help to overcome this disadvantage.

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

3 ORA could have chosen a mesh topology over a star topology for the cabled part of the new network.

(a) Explain **one** advantage to ORA of using a mesh topology for its network.

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

(b) Explain **two** disadvantages to ORA of using a mesh topology for its network.

1

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

2

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

4 ORA's rental agents will need to be able to handle and exchange client data, and sometimes make financial transactions remotely.

(a) Describe **two** data protection issues that ORA will need to be aware of.

1

.....

.....

.....

.....

.....

.....

2

.....

.....

.....

.....

.....

.....

[6]

(b) Explain **two** security procedures that ORA will need to ensure are used in order to deal with these issues.

1

.....

.....

.....

.....

.....

.....

2

.....

.....

.....

.....

.....

.....

[6]

5 ORA's office network will require wireless access for the rental agents when they are working in the office.

(i) Recommend a wireless network connection device that would be most suitable for this network.

..... [1]

(ii) Explain **two** reasons why this device is the most suitable.

1

.....

.....

.....

2

.....

.....

.....

[4]

SECTION B

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

7 Networks require a set of protocols in order to allow effective data communication between users.

(a) Describe what is meant by the term 'protocol'.

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

(b) Identify and describe **one** protocol that might be used in a network connected to the Internet.

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

8 Explain **one** purpose of a gateway within a network that is connected to the Internet.

.....

.....

.....

.....

.....

.....

..... [3]

9 Explain **one** purpose of a communications log.

.....

.....

.....

.....

.....

.....

..... [3]

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) 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.