

OCR

Oxford Cambridge and RSA

Friday 16 June 2017 – 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 Q4 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		12
2		4
3		3
4		6
5		12
6		8
7		5
8		4
9		2
10		2
11		3
12		9
Total		100

Answer **all** the questions.

SECTION A

These questions refer to the OCRS case study.

- 1 OCRS help desk technicians will sometimes recommend that customers install a network. They will always inform customers of the disadvantages as well as the benefits.
 - (a) Explain **two** benefits that a network can bring to a charity.

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[6]

(b) Explain **two** disadvantages to a charity of the use of a network rather than stand-alone computers.

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[6]

2 A technician has advised a charity to install a wireless network in its office. The charity has asked what a wireless network is and why they should choose this type of network.

(a) Define 'wireless local area network'.

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..... [2]

(b) Describe one advantage to the charity of using wireless technology rather than wired.

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..... [2]

3 Technicians will need to choose a technology when recommending a network for a charity.

Explain **one** wired LAN technology that might be recommended for a charity.

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5 OCRS recommends, installs and configures broadband connections for its customers.

(a) Define the term 'broadband'.

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(b) Explain **two** stages in the process of setting up a connection from a computer to the internet for a customer.

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[6]

(c) Evaluate the use of broadband rather than a dial-up connection for a charity where the use of the internet may be limited.

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[4]

6 The main router in the OCRS network will act as a gateway.

(a) Describe the function of the gateway in this network.

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(b) Explain **one** service that will be provided by the gateway.

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(c) Identify and describe **one** protocol used by this gateway.

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7 Customers will upload large amounts of website content to the OCRS web server. Web pages will be sent to requesting browsers from the OCRS web server.

Communication logs will be recorded on the web server for all transactions.

(a) Identify **two** items recorded in a communication log.

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..... [2]

(b) Explain how the contents of the communication log can be used by the OCRS network manager.

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SECTION B

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

8 Describe the function of the following servers:

(i) application server

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(ii) file server

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9 The TCP protocol defines how data is transmitted in packets.

Identify **two** components of a typical data packet.

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10 Data in computer networks is generally transmitted in digital form. Some of the data received by a network, for example sound input, might be analogue rather than digital data.

Compare 'analogue' data with 'digital' data.

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10

- 11 A Virtual Private Network (VPN) will allow users to access a local network from a remote connection.

Explain **one** potential use of a VPN.

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12 A web server may host an intranet and an extranet. Extranet provision brings security problems.

Discuss how to minimise security problems associated with hosting an extranet.

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

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END OF QUESTION PAPER

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