Candidate forename		Candidate surname	

Centre number					Candidate number				

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED GCE

G055

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

Networking Solutions

THURSDAY 23 JUNE 2011: Morning
DURATION: 1 hour 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

<u>OCR SUPPLIED MATERIALS:</u>
Instructions for Candidates G055/IC (inserted)

<u>OTHER MATERIALS REQUIRED:</u>
Candidate's pre-prepared materials

<u>READ INSTRUCTIONS OVERLEAF</u>

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes on the first page. 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 <u>ALL</u> the questions.

- Attach your pre-prepared materials for tasks 1–3.

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 <u>100</u>.

- 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.

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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.**

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_____ **[3]**

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

Drawback 1 _____

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_____

Drawback 2 _____

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_____ **[6]**

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

Discussion forums

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Data file exchange

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_____ **[6]**

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

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_____ **[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 _____

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_____ **[4]**

(b) **Discuss the implications of RGC choosing a client-server network.**

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

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_____ **[9]**

6   **Recommend, with reasons, a suitable connection media for the local area network at RGC.**

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_____ **[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 _____

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Function 2 _____

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_____ [4]

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

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_____ **[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.**

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_____ **[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.**

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_____ **[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.

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_____ **[2]**

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

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_____ [5]

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

Explain ONE of these measures.

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_____ [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.

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_____ **[11]**

END OF QUESTION PAPER