

<b>Candidate forename</b>		<b>Candidate surname</b>	
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<b>Centre number</b>						<b>Candidate number</b>				
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**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.**

**OCR SUPPLIED MATERIALS:**

**Instructions for Candidates G055/IC (inserted)**

**OTHER MATERIALS REQUIRED:**

**Candidate's pre-prepared materials**

**READ INSTRUCTIONS OVERLEAF**

## **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 ALL 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 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.**

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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** \_\_\_\_\_

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**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**



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