

ADVANCED GCE
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

G055

Unit 16: Networking Solutions

THURSDAY 5 JUNE 2008

Afternoon
 Time: 1 hour 30 minutes

Candidates answer on the question paper

Additional materials (enclosed): Instructions for Candidates G055/IC

Additional materials (required):
 Candidate's pre-prepared materials



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.
- Attach your pre-prepared material for tasks 1-3.

INFORMATION FOR CANDIDATES

- The number of marks for each question 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 awarded for using brand names of software packages or hardware.

FOR EXAMINER'S USE

Task 2	
Task 3	
1	
2	
3	
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6	
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8	
9	
10	
11	
12	
13	
14	
TOTAL	

This document consists of **11** printed pages, **1** blank page and an insert.

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Section A

This section relates to the case study and tasks on Intrepid Explorations Café (IEC).

- 1 Describe **one** advantage and **one** disadvantage to IEC's customers of installing a network with access to the Internet.

Advantage

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.....

Disadvantage

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.....

..... [4]

2 IEC can choose to install a peer-to-peer network or a client-server network.

(a) Identify **three** features of a peer-to-peer network.

Feature 1

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Feature 2

.....

Feature 3

..... [3]

(b) Describe **two** factors that could lead IEC to consider a peer-to-peer network.

Factor 1

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.....

.....

Factor 2

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..... [4]

3 The new network could be based on a logical star topology.

(a) Draw and label a diagram to show a logical star.

[4]

(b) Describe the operation of a logical star.

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

(c) Describe **one disadvantage** of using a logical star.

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..... [2]

4 IEC could choose to install a wireless network.

(a) Describe **two** items of hardware required for a wireless local area network (WLAN).

Item 1

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..... [4]

(b) Explain why a wireless network could be the most suitable for IEC.

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..... [2]

5 IEC's network will need some new hardware.

Describe the function of each of the following types of hardware.

(a) proxy server

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..... [2]

(b) UPS

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..... [2]

6 Identify and describe **two** items of hardware required to connect the network to the Internet.

Item 1

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Item 2

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..... [6]

7 IEC will transfer its web pages from its network to the ISP's server.

Identify and describe a protocol that could be used when transferring a file.

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..... [3]

8 When data is transferred across a network a communications log is kept and is referred to when solving problems.

(a) Identify **one** item of data that could be stored in a communications log.

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..... [1]

(b) Describe how a communications log could be used to help solve common data transfer problems.

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..... [4]

9 Customers at IEC will be able to access the Internet.

(a) Identify **three** Internet services that customers will have available to them.

Service 1

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Service 2

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Service 3

..... [3]

(b) Evaluate the provision of these services by IEC.

Evaluate the consequences to IEC of providing these services.

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..... [3]

Section B

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

10 A company develops its own website, which will be hosted by an ISP.

(a) Describe the steps the company will take to upload their website to the ISP's server.

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..... [4]

(b) (i) Define the term 'bandwidth'.

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..... [1]

(ii) Describe how bandwidth affects the time it takes for pages to be uploaded.

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..... [2]

(iii) State the calculation used to estimate the time to transfer a file.

.....
..... [1]

11 Describe the function of a client in a client-server network.

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..... [2]

12 Describe the process of posting a message on a bulletin board.

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..... [4]

13 Identify **two** health considerations that should be taken into account when designing workstations for network users.

Consideration 1
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Consideration 2
..... [2]

[Please turn over for question 14]

14 Describe **two** measures that can be taken to protect computer equipment from theft.

Measure 1

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Measure 2

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..... [4]

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