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General Certificate of Education  
2010

StudentBounty.com

71  
Candidate Number

Applied Information and  
Communication Technology

Assessment Unit A2 13

assessing

Unit 13: Networking and Communications

[A6J71]



MONDAY 14 JUNE, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.  
Answer **all twelve** questions on the paper in the spaces provided.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.  
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.  
Quality of written communication will be assessed in questions 5, 8 and 11.

ADVICE TO CANDIDATES

You are advised to take account of the marks for each part question in allocating the available examination time.

For Examiner's use only			
Question	Marks available	Marks	Remark
1	8		
2	6		
3	4		
4	6		
5	12		
6	6		
7	14		
8	10		
9	10		
10	4		
11	12		
12	8		
<b>Total</b>	<b>100</b>		



2 Synchronous and asynchronous data transmissions differ in a number of ways. Discuss these differences in terms of:

(a) Timing

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(b) Framing

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(c) Arrival at destination

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[6]

3 List and describe **two** disadvantages of having computers networked together.

Disadvantage 1

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Disadvantage 2

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[4]

4 Every computer connected to a network must have a network card inserted. List and describe **three** features of a network card.

Feature 1

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Feature 2

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Feature 3

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[6]



6 List and describe **three** properties of a network device known as a router.

Property 1

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Property 2

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Property 3

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[6]

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**(Questions continue overleaf)**

7 Consider Fig. 1 shown below and answer the questions that follow.

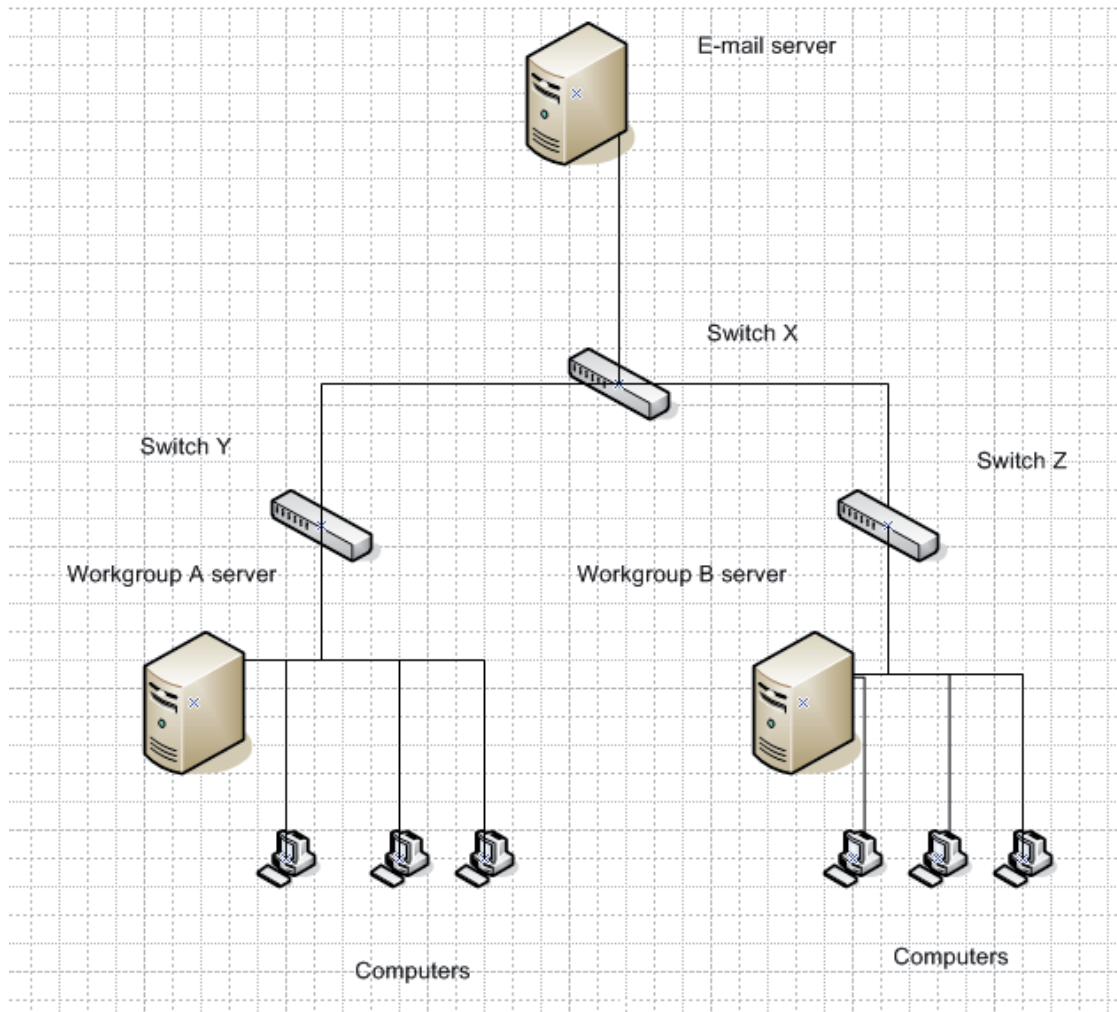


Fig. 1

(a) Describe the main features of a server.

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[4]



(b) Describe the type of cable you would normally expect to find connecting the switches to the computers.

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[2]

(c) Give **two** reasons why this company has decided to split its network into two workgroups.

Reason 1

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Reason 2

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[4]

(d) List and describe **two** advantages to the company in allowing their employees to use e-mail.

Advantage 1

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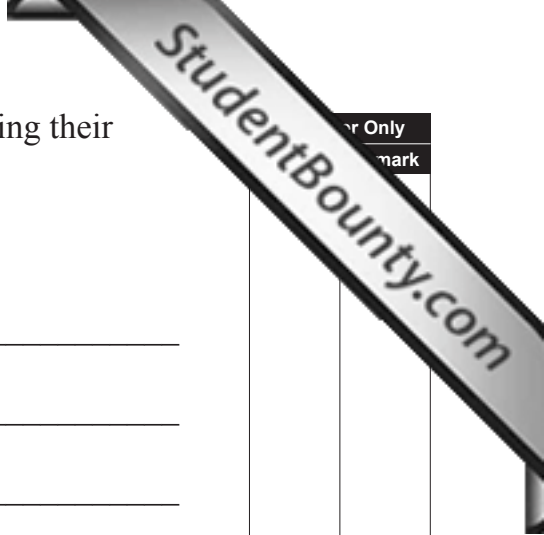
Advantage 2

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[4]



Question	Mark



or Only
mark

9 Each of the following statements about networks is either TRUE or FALSE. Place the word TRUE or FALSE correctly into the space opposite each statement.

An RJ-45 connector can be found in star based Ethernet technologies.	
A token ring network passes a data frame called a baton between each machine which is connected to the network.	
In order for a network to function properly, it must use software called a network operating system.	
Repeaters in a network are used to extend the cable run of a network.	
Networks which break down data into packets are a fairer way of sharing the medium on which the data will travel.	
Bridges in networks are useful for containing collisions.	
Hubs are used in networks to check a user's log on details such as passwords.	
Star topologies are used extensively in wide area networks.	
A network interface card is given a unique code by the manufacturer.	
Terminators are found in bus based networks.	

[10]

10 Describe **one** advantage and **one** disadvantage of using video conferencing.

Advantage

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Disadvantage

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[4]



12 Explain each of the following in relation to the successful passage of an Internet webpage from one location to another.

(a) Domain name resolution

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(b) IP addressing

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(c) MAC addressing

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(d) Firewall

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[8]

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**THIS IS THE END OF THE QUESTION PAPER**

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