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General Certificate of Education

2016

Centre Number

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Candidate Number

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Applied Information and Communication Technology

Assessment Unit A2 13

assessing

Unit 13: Networking and Communications

[A6J71]

WEDNESDAY 22 JUNE, MORNING



A6J71

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 in the space provided.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.

Quality of written communication will be assessed in questions **4** and **12**.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

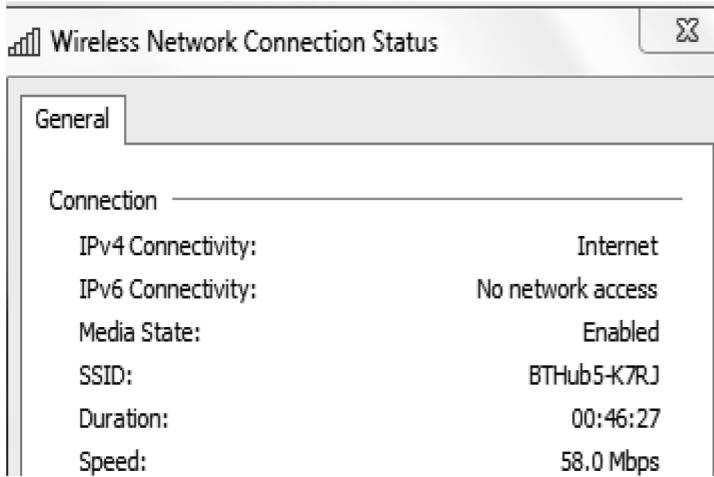
ADVICE TO CANDIDATES

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	4		
2	8		
3	16		
4	10		
5	6		
6	12		
7	10		
8	6		
9	3		
10	7		
11	6		
12	12		
Total	100		

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3 In a wireless network the status of the network is shown below.



Explain the meaning of the following terms.

(a) IPv4 Connectivity

[2]

(b) IPv6 Connectivity

[2]

(c) SSID

[2]

Examiner Only	
Marks	Remark

Further details of the wireless network connection details are shown below.

Network Connection Details:	
Property	Value
Connection-specific DNS Suffix	home
Description	Intel(R) Centrino(R) Wireless-N 130
Physical Address	B8-03-05-2A-29-5C
DHCP Enabled	Yes
IPv4 Address	192.168.1.126
IPv4 Subnet Mask	255.255.255.0

Explain the meaning of the following terms

(d) Physical Address B8-03-05-2A-29-5C

[2]

(e) DHCP Enabled

[4]

Examiner Only	
Marks	Remark

(f) IPv4 Subnet Mask

[4]

Examiner Only	
Marks	Remark

- 5 When referring to bus based networks, identify which of the statements listed below are **true** and which are **false**.

Write the word true or false beside each statement below.

In a bus network the failure of one station affects the whole network.	
Within a bus network, each network interface card has its own unique identifier.	
Only one hub can be installed in a bus network.	
Bus networks can be used as peer to peer networks when there are only a few computers to be connected.	
The cabling for bus networks requires the use of terminators.	
A bus network uses a token to pass on data from one node to another.	

[6]

Examiner Only	
Marks	Remark

6 Network security is a major problem for computer networks. Describe the features of the following types of attack.

(a) Denial of Service (DoS) attack

[3]

(b) Computer virus

[3]

Examiner Only	
Marks	Remark

(c) Trojan horses

[3]

(d) Worms

[3]

Examiner Only	
Marks	Remark

- 7 (a) Companies set out Acceptable Use Policies (AUP) to ensure that employees act responsibly with regard to the internet. Name and describe **three** items that you would expect to find in an AUP.

Item 1 _____

Item 2 _____

Item 3 _____

_____ [6]

- (b) Describe **two** risks for the company if it does not have an AUP.

Risk 1 _____

Risk 2 _____

_____ [4]

Examiner Only

Marks

Remark

8 Complete the sentences in the box below by inserting the correct number.

1. IP addressing 2. subnet mask 3. TCP/IP
 4. MAC address 5. DHCP 6. ARP

A unique identifier associated with an item of networking equipment is a . . .	
A discovery protocol used to match a MAC address with an IP address is . . .	
To determine the host section of a network use a . . .	
The management of network traffic becomes easier and more practical with . . .	
A transmission protocol used on the Internet is . . .	
A protocol for assigning or supplying IP addresses is . . .	

[6]

9 Tick (✓) **three** features below that you would expect to find associated with a proxy server.

It is a computer that holds all the software that users may need on the network.	
It is a computer that eases the load on Web and FTP servers by requesting updated or new files that are not already held in store.	
It is a computer that tries to prevent 'hacking'.	
It is a computer that sits between your computer and the Web server whose pages you are accessing.	
It is a computer that holds a 'cache' of the most popular recently accessed web pages.	
It is a very powerful computer.	
It allocates permissions to users on the network.	

[3]

Examiner Only	
Marks	Remark

10 The table below shows features that may or may not belong to a firewall. Identify which of the features listed below are **true** or which are **false**.

Write the word true or false beside each statement below.

It is software or hardware used to prevent viruses.	
It holds the addresses of all the computers in the World Wide Web.	
It can filter data packets based on the MAC address.	
It contains the website addresses that are not permitted to be viewed by users of a network.	
It is contained in a black box.	
It can be used as a word processor.	
It resembles a router.	

[7]

11 Give **three** reasons why the sending of sensitive business data by e-mail may be a risk to the business.

Reason 1 _____

Reason 2 _____

Reason 3 _____

_____ [6]

Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

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