AQA Computer Science A-Level
4.9.3 The Internet
Past Paper Questions

January 2009 Comp 2

6 A Uniform Resource Locator (URL) is the address of a resource on the Internet. For example, http://www.aqa.org.uk/qual/gce/computing_new.php.

Explain the different parts of this address.

6 (i) http://..

6 (ii) www.aqa.org.uk ....

6 (iii) /qual/gce/computing_new.php ....

....

(3 marks)

January 2010 Comp 2

1 (a) Put **one** tick on each row of **Table 1** to classify each of (i), (ii) and (iii) as either a URL, a Domain Name, an IP address or a Protocol.

Table 1

		URL	Domain Name	IP Address	Protocol
(i)	http://www.guineas.co.uk				
(ii)	212.58.251.195				
(iii)	guineas.co.uk				

(3 marks)

1 (b) What is the purpose of a Domain Name Server on the Internet?

....

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(1 mark)

January 2011 Comp 2

10   To request a particular web page on the Internet a user will need to enter into the address bar of their web browser a Uniform Resource Locator (URL).
This is in the form of:

```
http://www.aqa.org.uk/courses/computing.html
```

10 (a)   The first part `http://` is the protocol.

Describe the following parts of this URL.

```
aqa.org.uk
```

....

```
courses/computing.html
```

....

(2 marks)

10 (b)   What is a protocol?

....

(1 mark)

10 (d)   192.120.12.67 is a typical IP address.

Why do people prefer to use a Fully Qualified Domain Name (FQDN) rather than an IP address?

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....

(1 mark)

5   **Figure 5** below is a partial view of a router network connecting an e-mail client to an e-mail server.

Figure 5
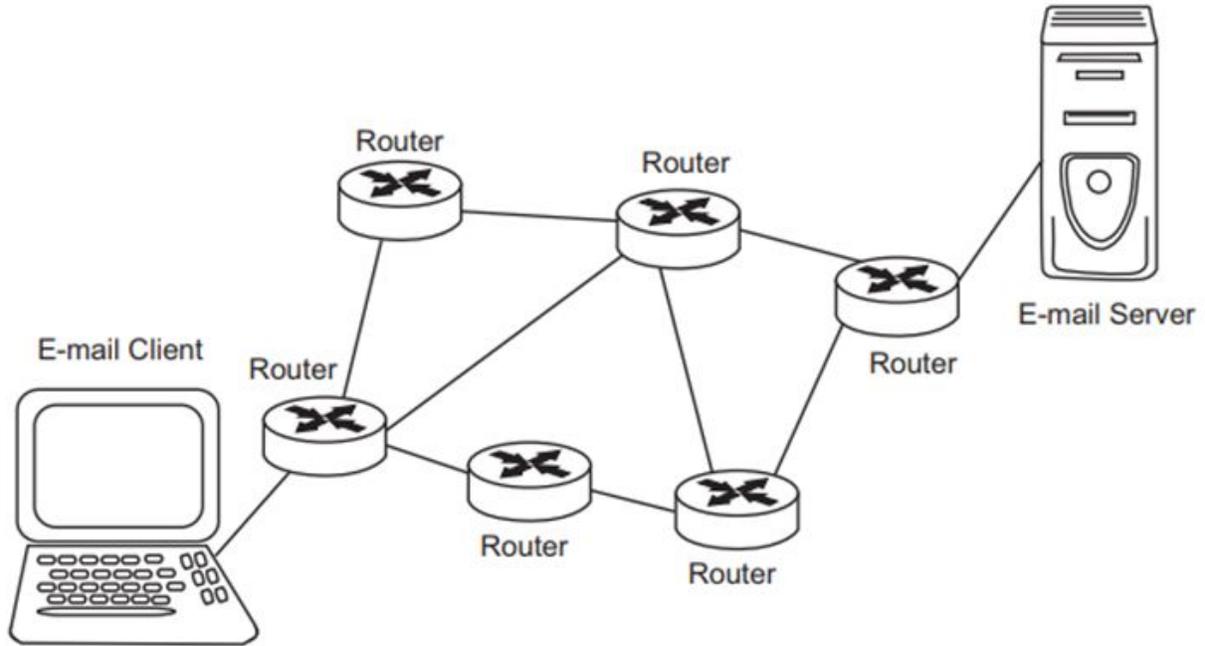
5 (a)   Describe **two** roles of the routers shown in **Figure 5** above.

Role 1: ....

....

Role 2: ....

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(2 marks)

6 (a) Explain the differences between the World Wide Web and the Internet.

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(4 marks)

6 (b) Major parts of the Internet run on a packet switched network.

What is meant by the term *packet switching*?

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(2 marks)

6 (c) A packet being sent across the Internet may contain the details of a socket, for example 12.23.45.89:80.

Complete the table below to explain what each part of the socket in the table represents.

Part	Represents
12.23.45.89	
80	

(2 marks)

June 2010 Comp 2

2 (c) A web server uses well known port numbers to provide a service to client computers.

Why must these port numbers be well known?

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....

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(2 marks)

3 Describe the **three** labelled parts of this URL.

ftp://ftp.fileden.org.uk/pascal/source.pas

    A   B   C

A ....

B ....

C ....

(3 marks)

June 2011 Comp 2

2   Below is the Uniform Resource Locator (URL) of a web page.

<div align="center">

`http://www.aqa.org.uk`

</div>

Explain what each of these parts of the URL mean.

`http://` ....

....

`www` ....

....

`uk` ....

....

(3 marks)

8 (e) Discuss the security threats that the network manager will need to deal with because the LAN is connected to the Internet, together with how these may be dealt with.

In your answer you will also be assessed on your ability to use good English, and to organise your answer clearly and coherently in complete sentences, using specialist vocabulary where appropriate.

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(6 marks)

8 (c) The system will be networked within the college. This network will then be connected to the Internet so that staff who are out of the college can log in and access the system. This connection will use a gateway.
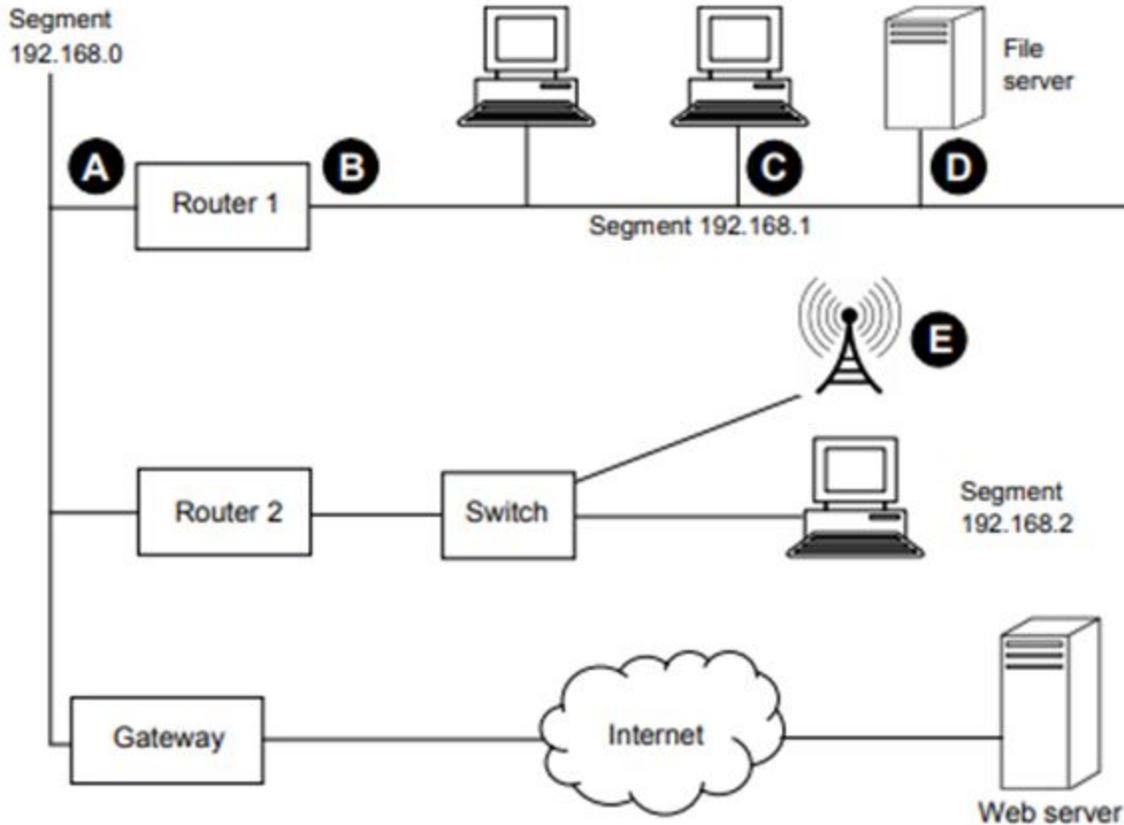
What is the purpose of the gateway?

....

....
(1 mark)

June 2013 Comp 3

Figure 8 is repeated below so that you can answer question part 5 (f) without having to turn back in the question paper booklet.

Figure 8 (repeated)

The student now uploads a file from her computer to a web server over the Internet.

5 (f)   Write a detailed description of how one packet of data that the student is uploading to the web server will be routed from her computer in the United Kingdom to the web server that is located in Chicago in the United States of America. You may assume that the web browser software on the student's computer has already looked up, using a domain name server, the IP address of the web server.

Your description should cover:

•   how the packet will be routed within the LAN from the student's computer to the gateway **and**

•   how, once it has reached the gateway, the packet will be routed across the Internet to the web server that the data is being uploaded to.

In your answer you will be assessed on your ability to use good English, and to organise your answer clearly in complete sentences, using specialist vocabulary where appropriate.   (8 marks)

0 4 . 3   Explain why browsing the Internet might be slower at a public hotspot in a coffee shop than at home on a wireless network.

[2 marks]

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