The Structure Of The Internet

1. Describe, with an example, the appearance of an IP (v4) address (2)

2. Calculate the total possible number of addresses available for use (express as either a denary number or as a power of 2). (1)

3. **Name** and **describe** the following parts of a URL: (4)

   http://news.bbc.co.uk

   a. http://

   b. news

   c. bbc

   d. co.uk

4. What does DNS stand for? (1)

5. Explain the purpose of a DNS Server. (3)

6. Describe the relationship between a URL and a URI. (3)

7. Describe the role of a Domain Name Registrar / Internet Registrar. (2)

8. List 3 services provided by ISPs (3)

9. Name the protocol used for transferring webpages as both an acronym and in full. (2)

10. Explain the purpose of the TELNET protocol. (2)

11. List 2 of the 3 protocols commonly used for email traffic. (2)

12. What does the acronym FTP stand for? (1)

13. Suggest one situation where it would be preferable have:
    a. an anonymous FTP server. (2)

    b. a non-anonymous FTP server. (2)

14. Explain what happens within a web browser when a user clicks on a hyperlink. (4)

15. Give 3 pieces of information that might be found in a data packet, other than the data itself. (3)

16. Give 2 advantages for using packet switching to transfer data. (2)

17. Which protocol is used to send data cross the World Wide Web. (1)

18. Name 3 other types of data that can be sent across the Internet. (3)

19. Give 2 disadvantages for putting some types of data on an Intranet instead of the Internet. (2)

20. Explain why the Client/Server model is advantageous to the end-user. (2)

21. List and describe the purpose of the 4 layers of the TCP/IP protocol stack, in ascending order. (8)

22. Describe the purpose of a TCP/IP socket. (2)

23. Paul logs on to his mail server to download a recent email message. Describe the stages that the email data goes through in order to reach Paul's computer. (10)

24. What port numbers are traditionally used for:
    a. HTTP traffic? (1)

    b. Email traffic? (1)

25. Explain the difference between the HTTP protocol and the HTTPS protocol. (2)

26. Explain what is meant by the term 'protocol'. (1)

27. Alison clicks on a hyperlink that takes her to http://www.aqa.org.uk. Describe, using the main protocols involved, the process that results in the correct web page loading in Alison's browser. (6)

Total marks available: 78