Introduction to Computer Science

Problem Set 5

Please mark your answers in the answer sheet provided for this homework!

True / False (one point each)

Chapter 15

1. True or False? A computer network is a collection of connected computing devices that may communicate and share resources.

2. True or False?   Printers can NOT be connected directly to a computer network.

3. True or False? A file server stores and manages files for multiple users on a network.

4. True or False?   A local-area network (LAN) connects a small number of nodes in a building or close geographic area.

5. True or False?   A ring topology is a LAN configuration in which a central node controls all message traffic.

6. True or False?   Ethernet has become the industry standard for local-area networks.

7. True or False? Ethernet is based on a ring topology.

8. True or False?   A wide-area network (WAN) connects two or more local-area networks.

9. True or False? The Internet is a metropolitan-area network (MAN).

10. True or False? The Internet backbone is a set of high-capacity, high-speed networks that carry Internet traffic.

11. True or False?   An Internet service provider (ISP) is a company that provides other companies or individuals with access to the Internet.

12. True or False?   Both DSL and cable connections are broadband connections.

13. True or False?   Broadband connections often provide more rapid downloads than uploads.

14. True or False?   Messages sent over a shared communication line are divided into fixed-size, numbered pieces called packets.

15. True or False? Network packets contain instructions regarding the route they should travel to reach their destination.

16. True or False? A repeater is a network device that duplicates a packet and sends the duplicate by an alternate route.

17. True or False? A file's MIME type indicates the format of files that are attached to email messages.

18. True or False?   A hostname uniquely identifies a particular computer among all others on the Internet.

19. True or False?   A domain name server is a computer that attempts to translate a hostname into an IP address.

20. True or False? The domain name system (DNS) uses one large table to map hostnames to IP addresses.

Chapter 16

21. True or False? A Website is a collection of related Web pages.

22. True or False?   Network communications were possible before the development of the Web.

23. True or False? A Web browser is a software tool that retrieves and displays Web pages.

24. True or False? A Web server generates Uniform Resource Locators (URL).

25. True or False? Some search engines index only part of a Web page, such as titles and headings.

26. True or False? Instant messages are encrypted before they are sent.

27. True or False?   Some bloggers consider themselves to be "citizen journalists."

28. True or False? A website might use a cookie to determine the number of unique visitors the site has had.

29. True or False? A cookie can execute code on your computer.

30. True or False?   HTML documents can be created using a regular text editor.

31. True or False? HTML is considered to be a markup language.

32. True or False?   Tags are used in a markup language to annotate the information stored in a document.

33. True or False? An HTML document is divided into five primary sections.

34. True or False?   A link in an HTML document allows an image to be displayed.

35. True or False? An image can be a link to another Web page in an HTML document.

36. True or False? HTML is case sensitive.

37. True or False? A browser ignores extra spaces and blank lines in an HTML document.

38. True or False?   A browser will usually number an ordered list and use bullets for unordered lists.

39. True or False?   HTML includes six predefined heading elements for creating titles and subtitles in documents.

40. True or False? An attribute is an HTML tag that links to another Web page.

41. True or False?   An HTML document looks the same in any browser that displays it.

42. True or False? A Java applet is a program that is designed to be executed via the World Wide Web.

43. True or False? A Java scriptlet is code embedded in an HTML document to create dynamic content on a Web page.

44. True or False? XML stands for Extensible Markup Language

45. True or False? HTML has a predefined set of tags and XML does not.

46. True or False?   XML is a metalanguage, used to define other markup languages.

47. True or False? An Extensible Stylesheet Language (XSL) document can be used to transform an XML document into another format.

Multiple Choice (1 point each)

Chapter 15

48. Which of the following is a device for converting an analog signal to a digital signal and back again?

A. modem
B. gateway
C. node
D. router
E. repeater

49. Which of the following is a computer on a LAN that handles all communication between that network and others?

A. modem
B. gateway
C. node
D. router
E. repeater

50. Which of the following is a generic term used for any device on a network?

A. modem
B. gateway
C. node
D. router
E. repeater

51. Which of the following is a network device that directs a packet toward its final destination?

A. modem
B. gateway
C. node
D. router
E. repeater

52. Which of the following is a network device that strengthens and propagates a signal along a long communication line?

A. modem
B. gateway
C. node
D. router

E. repeater

53. In which of the following LAN configurations do all nodes share a single communication line that carries messages in both directions?

A. bus topology
B. ring topology
C. gateway topology
D. star topology
E. metropolitan topology

54. In which of the following LAN configurations is there a center node to which all others are connected?

A. bus topology
B. ring topology
C. gateway topology
D. star topology
E. metropolitan topology

55. Which of the following LAN configurations has become a standard for local-area networks?

A. bus topology
B. ring topology
C. gateway topology
D. star topology
E. metropolitan topology

56. Which of the following describes a set of high-speed networks on the Internet, sponsored by companies such as AT&T and Verizon?

A. backbone
B. firewall
C. bandwidth
D. packet switching
E. hostname

57. Which of the following is the term used to describe a machine and software that protects a network from inappropriate access?

A. backbone
B. firewall
C. bandwidth
D. packet switching
E. hostname

58. Which of the following describes the process of dividing a message into small pieces and sending those pieces separately to the destination?

A. backbone
B. firewall
C. bandwidth
D. packet switching
E. hostname

59. Which of the following is an IP program that can be used to test whether a particular network computer is active and reachable?

A. ping
B. telnet
C. port
D. TCP/IP
E. SMTP

60. Which of the following is a high-level protocol used to log into a computer system from a remote computer?

A. ping
B. telnet
C. port
D. TCP/IP
E. SMTP

61. Which of the following is a numeric designation that corresponds to a particular high-level protocol?

A. ping
B. telnet
C. port
D. TCP/IP
E. SMTP

62. Which of the following is a suite of protocols and programs that support low-level network communication?

A. ping
B. telnet
C. port
D. TCP/IP
E. SMTP

63. Which of the following is a high-level protocol used to specify the transfer of electronic mail?

A. ping
B. telnet
C. port
D. TCP/IP
E. SMTP

64. Which of the following is made up of four decimal numbers separated by dots?

A. IP address
B. domain name
C. top-level domain
D. MIME type
E. Hostname

65. Which of the following would correspond to an organization, such as a university or company?

A. IP address
B. domain name
C. top-level domain
D. MIME type
E. Hostname

66. Which of the following indicates the general type of an organization or a country of origin?

A. IP address
B. domain name
C. top-level domain
D. MIME type
E. Hostname

67. Which of the following indicates the format of a file attached to an email message?

A. IP address
B. domain name
C. top-level domain
D. MIME type
E. hostname

Multiple Choice

68.   Which of the following contains the address for accessing a Web page?

A.   uniform resource locator
B.   web server
C.   web browser
D.   weblog
E.   cookie

69.   Which of the following is a computer dedicated to responding to requests for a Web page?

A.   uniform resource locator
B.   web server
C.   web browser
D.   weblog
E.   cookie

70.   Which of the following is a software tool that retrieves and displays Web pages?

A.   uniform resource locator
B.   web server
C.   web browser
D.   weblog
E.   cookie

71.   Which of the following is a mechanism for publishing periodic articles on the Web?

A.   uniform resource locator
B.   web server
C.   web browser
D.   weblog
E.   cookie

72.   Which of the following is the primary mechanism for representing the content of a Web page?

A.   HTML
B.   tag
C.   attribute
D.   cookie
E.   hypertext

73. Which of the following is a notation that uses a name in angle brackets to annotate a piece of Web page information?

A. HTML
B. tag
C. attribute
D. markup language
E. hypertext

74. Which of the following is part of an HTML tag and provides additional information about the element?

A. cookie
B. ordered list
C. attribute
D. markup language
E. hypertext

75. Which of the following refers to the fact that the information on the Web is not organized in a linear fashion?

A. HTML
B. tag
C. attribute
D. markup language
E. hypertext

76. Which of the following has no predefined set of tags?

A. XML
B. applet
C. scriptlet
D. XSL
E. Java server page

77. Which of the following is a Java program designed to be embedded into a Web page and executed in a browser?

A. XML
B. applet
C. scriptlet
D. XSL
E. Metalanguage

78. Which of the following is a small piece of code that is embedded directly into the HTML of a Web page?

A. XML
B. applet
C. scriptlet
D. XSL
E. Metalanguage

79. Which of the following is a language for transforming XML into various output formats?

A. Java server page
B. applet
C. scriptlet
D. XSL
E. Metalanguage

80. XML is an example of which of the following?

A. document type definition
B. applet
C. scriptlet
D. XSL
E. Metalanguage

Fill-in-the-Blank (one point each)

Chapter 15

81. A(n) _____ is a set of rules that defines how data is formatted and processed on a network.

82. A(n) _____ network connects a relatively small number of machines in a close geographical area.

83. A(n) _____ network connects two or more local-area networks over a potentially large geographic area.

84. A(n) _____ network is a large network that covers a college campus, business campus, or city.

85. A LAN using a(n) _____ topology uses a central node that controls all message traffic.

86. The _____ reference model is a seven-layer breakdown of network interaction used to facilitate communication standards.

87. matiss.csc.villanova.edu is an example of a(n) _____ that uniquely identifies one computer among all others on the Internet.

88. A(n) _____, such as 205.39.155.18, is used by network software to designate a particular network resource.

89. In the name www.apple.com, apple.com is the _____.

90. .com and .edu are examples of a(n) _____.

HTML Coding (2 points each)

91. Write a line of HTML code that makes the phrase "View Favorites" a link to the document called favorites.html.

92. Write a line of HTML code that displays the image stored in the file logo.jpg.

93. Write a line of HTML code that treats the phrase "Executive Summary" as a third level header.

94. Write HTML code that displays the words "blue", "orange", and "green" in an unordered list.

95. Write HTML code that displays the phrases "Sautee the onions", "Mix in green peppers", and "Add salt to taste" in an ordered list.