

1. Which layer of the OSI model is responsible for end-to-end communication and error checking?
 - A. Transport
 - B. Network
 - C. Application
 - D. Data Link

2. What is the purpose of a VLAN?
 - A. To improve network performance
 - B. To enhance network security
 - C. To expand network bandwidth
 - D. To reduce network costs

3. Which network topology uses a central hub or switch to connect all nodes?
 - A. Star
 - B. Mesh
 - C. Bus
 - D. Ring

4. Which protocol is used to automatically assign IP addresses to devices on a network?
 - A. DHCP
 - B. DNS
 - C. FTP
 - D. HTTP

5. What is the maximum length of a CAT6 cable for a 10Gbps Ethernet connection?
 - A. 50 meters
 - B. 100 meters
 - C. 250 meters
 - D. 500 meters

6. In a fiber-optic cable, what transmits the data signal?
 - A. Copper wire
 - B. Light waves
 - C. Electrical pulses
 - D. Radio frequency

7. Which wireless encryption standard is considered the most secure?
 - A. WEP
 - B. WPA
 - C. WPA2
 - D. WPA3

8. What is the purpose of a network switch?
 - A. To forward data packets between devices on a network
 - B. To act as a central point for wireless devices to connect
 - C. To provide an internet connection to devices
 - D. To manage network traffic

9. Which protocol is used to translate domain names into IP addresses?
 - A. DHCP
 - B. DNS
 - C. FTP
 - D. HTTP

10. Which network device is used to connect multiple networks together?
 - A. Hub
 - B. Switch
 - C. Router
 - D. Bridge

11. What is the main function of a firewall?
- A. Packet filtering
 - B. Bandwidth control
 - C. Load balancing
 - D. VPN tunneling
12. What is the maximum data rate of the 802.11ac standard?
- A. 54 Mbps
 - B. 450 Mbps
 - C. 1.3 Gbps
 - D. 6.9 Gbps
13. Which type of cable has the highest resistance to interference?
- A. UTP
 - B. STP
 - C. Coaxial
 - D. Fiber-optic
14. What is the main purpose of a network protocol?
- A. To define the rules for communication between devices on a network
 - B. To encrypt data transmissions
 - C. To control the flow of data between devices
 - D. To convert data into a format that can be transmitted over a network
15. In a subnet mask, what do the 1's represent?
- A. Network bits
 - B. Host bits
 - C. Gateway bits
 - D. Broadcast bits
16. Which protocol is used to synchronize time between computers on a network?
- A. NTP
 - B. DNS
 - C. DHCP
 - D. SNMP

17. Which of the following is a Class B private IP address?
- A. 10.0.0.1
 - B. 172.16.0.1
 - C. 192.168.0.1
 - D. 255.255.255.0
18. What is the primary function of a network load balancer?
- A. Distribute network traffic evenly across multiple servers
 - B. Increase the available bandwidth on a network
 - C. Provide redundancy in case of network failure
 - D. Prioritize network traffic based on application
19. Which type of network topology is most resilient to individual device failures?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
20. What is the primary purpose of Quality of Service (QoS) in networking?
- A. To prioritize certain types of network traffic
 - B. To increase network security
 - C. To manage the allocation of IP addresses
 - D. To optimize data transmission rates
21. Which protocol is used for secure file transfer over a network?
- A. FTP
 - B. SFTP
 - C. TFTP
 - D. SCP
22. What is the maximum transmission speed of a T1 line?
- A. 1.544 Mbps
 - B. 10 Mbps
 - C. 100 Mbps
 - D. 1 Gbps

23. What is a common reason for implementing a demilitarized zone (DMZ) in a network?

- A. To isolate high-security devices
- B. To provide a secure connection for remote users
- C. To separate public-facing services from the internal network
- D. To monitor network traffic

24. Which of the following is a network monitoring protocol?

- A. DNS
- B. DHCP
- C. SNMP
- D. NTP

25. What is the primary purpose of a network intrusion detection system (IDS)?

- A. To prevent unauthorized access to a network
- B. To monitor and analyze network traffic for potential threats
- C. To provide secure remote access to a network
- D. To manage the allocation of IP addresses

26. What is the primary function of a network access control (NAC) system?

- A. To manage network resources
- B. To enforce security policies on devices connecting to the network
- C. To balance network traffic
- D. To filter network traffic

27. Which protocol is commonly used for remote network management and configuration?

- A. SNMP
- B. SSH
- C. Telnet
- D. RDP

28. In networking, what is a collision domain?

- A. A network segment where multiple devices share the same bandwidth
- B. A network segment where devices experience signal interference
- C. The area within a network where data packets collide and cause errors
- D. A network segment where multiple devices have the same IP address

29. What is the purpose of using a network protocol analyzer?
- A. To manage network devices remotely
 - B. To monitor and troubleshoot network performance
 - C. To secure network connections
 - D. To test network cables
30. Which routing protocol uses the Bellman-Ford algorithm?
- A. OSPF
 - B. EIGRP
 - C. RIP
 - D. BGP
31. Which network device is used to amplify a signal in a wired network?
- A. Repeater
 - B. Switch
 - C. Router
 - D. Bridge
32. Which type of network attack is characterized by a flood of requests to a target system, causing it to become unavailable?
- A. Man-in-the-middle attack
 - B. DDoS attack
 - C. ARP spoofing
 - D. Brute force attack
33. What is the primary purpose of a Virtual Private Network (VPN)?
- A. To create a secure connection over a public network
 - B. To provide additional network resources
 - C. To increase network performance
 - D. To allow remote network management
34. What is the maximum transmission distance for a single-mode fiber-optic cable?
- A. 500 meters
 - B. 2 kilometers
 - C. 40 kilometers
 - D. 100 kilometers

35. What is a common method for increasing wireless network coverage?
- A. Using stronger encryption
 - B. Implementing a mesh network
 - C. Adding access points
 - D. Decreasing the number of connected devices
36. Which IPv6 address type is used for multicast communication?
- A. Unicast
 - B. Anycast
 - C. Multicast
 - D. Broadcast
37. Which protocol is used to remotely access and manage network devices at the command line?
- A. RDP
 - B. SSH
 - C. SNMP
 - D. Telnet
38. What is the primary purpose of a network proxy server?
- A. To filter and cache web content
 - B. To balance network traffic
 - C. To provide remote access to network resources
 - D. To store network backups
39. What is the main function of port mirroring?
- A. To improve network security
 - B. To forward data between devices
 - C. To duplicate network traffic for analysis
 - D. To manage network devices
40. Which protocol is used for email retrieval?
- A. SMTP
 - B. POP3
 - C. IMAP
 - D. HTTP

41. What is the primary function of an Intrusion Prevention System (IPS)?
- A. To detect and block network threats in real-time
 - B. To filter and cache web content
 - C. To provide a secure connection for remote users
 - D. To manage network devices
42. Which of the following is a Class C private IP address?
- A. 10.0.0.1
 - B. 172.16.0.1
 - C. 192.168.0.1
 - D. 255.255.255.0
43. What is the maximum data rate of the 802.11n standard?
- A. 54 Mbps
 - B. 150 Mbps
 - C. 300 Mbps
 - D. 600 Mbps
44. What is the primary purpose of a network address translation (NAT)?
- A. To conserve IPv4 address space
 - B. To improve network security
 - C. To increase network performance
 - D. To simplify network management
45. Which network cable type is used for connecting devices of the same type?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
46. What type of network cable is used for Gigabit Ethernet connections?
- A. CAT5
 - B. CAT5e
 - C. CAT6
 - D. CAT6a

47. What is the primary purpose of a Dynamic Domain Name System (DDNS)?
- A. To assign IP addresses to devices on a network
 - B. To automatically update DNS records when a device's IP address changes
 - C. To encrypt network communications
 - D. To improve network performance
48. What type of network attack is characterized by intercepting and altering network communication between two devices?
- A. Man-in-the-middle attack
 - B. DDoS attack
 - C. ARP spoofing
 - D. Brute force attack
49. Which wireless network topology connects devices in a linear arrangement?
- A. Ad-hoc
 - B. Infrastructure
 - C. Point-to-point
 - D. Point-to-multipoint
50. Which network tool is used to measure the round-trip time for a packet to travel between two devices?
- A. Traceroute
 - B. Ping
 - C. Netstat
 - D. Nslookup
51. What is the primary function of a network bridge?
- A. To divide a network into smaller segments
 - B. To amplify a network signal
 - C. To connect multiple networks together
 - D. To manage network resources
52. Which type of network is typically used to connect devices in a small geographic area, such as an office or home?
- A. LAN
 - B. MAN
 - C. WAN
 - D. PAN

53. What is the primary purpose of a Uninterruptible Power Supply (UPS)?
- A. To provide temporary power during a power outage
 - B. To protect against power surges
 - C. To monitor network performance
 - D. To manage network devices
54. What is the primary purpose of a network patch panel?
- A. To organize and manage network cable connections
 - B. To amplify a network signal
 - C. To provide network resources
 - D. To balance network traffic
55. Which protocol is used to send email messages between mail servers?
- A. SMTP
 - B. POP3
 - C. IMAP
 - D. HTTP
56. Which type of network cable consists of multiple twisted pairs of copper wire?
- A. UTP
 - B. STP
 - C. Coaxial
 - D. Fiber-optic
57. What is the primary purpose of a wireless network controller?
- A. To manage and configure multiple wireless access points
 - B. To provide wireless network resources
 - C. To balance wireless network traffic
 - D. To amplify a wireless network signal
58. Which type of network device filters traffic based on MAC addresses?
- A. Router
 - B. Switch
 - C. Firewall
 - D. Bridge

59. Which of the following is a Class A private IP address?
- A. 10.0.0.1
 - B. 172.16.0.1
 - C. 192.168.0.1
 - D. 255.255.255.0
60. What is the primary purpose of a port scanner?
- A. To identify open ports on a network device
 - B. To monitor network traffic
 - C. To manage network devices
 - D. To test network cables
61. Which of the following is a technique used to prevent unauthorized access to a wireless network?
- A. MAC address filtering
 - B. QoS
 - C. Load balancing
 - D. NAT
62. What type of network topology connects devices in a closed loop?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
63. Which type of network cable is used for connecting devices of different types, such as a computer and a switch?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
64. What is the primary purpose of a Network Time Protocol (NTP) server?
- A. To provide network resources
 - B. To synchronize time between network devices
 - C. To balance network traffic
 - D. To manage network devices

65. Which of the following is a technique used to prevent IP address conflicts on a network?
- A. Subnetting
 - B. DHCP
 - C. DNS
 - D. ARP
66. What is the primary purpose of a network DMZ?
- A. To provide a secure connection for remote users
 - B. To improve network performance
 - C. To separate public-facing services from the internal network
 - D. To manage network devices
67. Which of the following is a type of network cabling that uses light to transmit data?
- A. UTP
 - B. STP
 - C. Coaxial
 - D. Fiber-optic
68. Which type of network device is used to provide a connection point for wired network devices?
- A. Switch
 - B. Router
 - C. Firewall
 - D. Access point
69. What is the maximum data rate of the 802.11ac standard?
- A. 600 Mbps
 - B. 1.3 Gbps
 - C. 2.34 Gbps
 - D. 6.77 Gbps
70. Which network protocol is used to map IP addresses to their corresponding MAC addresses?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP

71. What is the maximum transmission distance for a 10GBASE-T Ethernet connection?
- A. 33 meters
 - B. 55 meters
 - C. 100 meters
 - D. 300 meters
72. Which type of network cable is used for connecting a computer to a console port?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
73. What is the primary purpose of a network firewall?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide network resources
 - D. To control network traffic based on a set of rules
74. What is the maximum transmission distance for a 1000BASE-T Ethernet connection?
- A. 25 meters
 - B. 50 meters
 - C. 100 meters
 - D. 300 meters
75. Which type of network device uses routing tables to determine the best path for forwarding packets between networks?
- A. Switch
 - B. Router
 - C. Firewall
 - D. Bridge
76. What is the primary purpose of a Virtual Local Area Network (VLAN)?
- A. To improve network security and performance by segmenting a network
 - B. To provide a secure connection for remote users
 - C. To manage network devices
 - D. To organize and manage network cable connections

77. Which wireless network topology connects multiple wireless access points to create a single, large network?
- A. Ad-hoc
 - B. Infrastructure
 - C. Point-to-point
 - D. Mesh
78. What is the maximum transmission distance for a multimode fiber-optic cable?
- A. 500 meters
 - B. 2 kilometers
 - C. 10 kilometers
 - D. 40 kilometers
79. Which protocol is used to assign IP addresses automatically to devices on a network?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP
80. Which network topology is characterized by having each device connected to two other devices, forming a continuous loop?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
81. Which type of network attack involves capturing and replaying network packets in an attempt to gain unauthorized access?
- A. Man-in-the-middle attack
 - B. DDoS attack
 - C. Replay attack
 - D. Brute force attack
82. What is the purpose of using a demarcation point in a network?
- A. To provide a secure connection for remote users
 - B. To separate the responsibility of the service provider and customer
 - C. To improve network performance
 - D. To manage network devices

83. What is the primary purpose of a network load balancer?
- A. To manage network devices
 - B. To distribute network traffic across multiple resources
 - C. To amplify a network signal
 - D. To provide network resources
84. Which of the following is a type of network cabling that uses a single copper conductor surrounded by insulation and a shield?
- A. UTP
 - B. STP
 - C. Coaxial
 - D. Fiber-optic
85. Which of the following is a technique used to prioritize specific network traffic, such as VoIP or video streaming?
- A. MAC address filtering
 - B. QoS
 - C. Load balancing
 - D. NAT
86. Which of the following is a network device that combines the functionality of a switch, router, and firewall?
- A. Access point
 - B. Network bridge
 - C. Unified threat management (UTM) device
 - D. Network hub
87. What is the primary purpose of a network protocol analyzer?
- A. To manage network devices
 - B. To distribute network traffic across multiple resources
 - C. To monitor and analyze network traffic for troubleshooting and performance analysis
 - D. To provide network resources
88. Which network protocol is used to discover neighboring devices on a network?
- A. SNMP
 - B. LLDP
 - C. NTP
 - D. DNS

89. What is the primary purpose of a Virtual Private Network (VPN)?
- A. To manage network devices
 - B. To provide a secure connection between remote users and a private network
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
90. Which of the following is a technique used to increase the available bandwidth on a network by combining multiple physical links into a single logical link?
- A. Load balancing
 - B. Link aggregation
 - C. QoS
 - D. Subnetting
91. Which type of network device is used to convert an analog telephone signal into digital data that can be transmitted over the internet?
- A. Switch
 - B. Router
 - C. Firewall
 - D. VoIP gateway
92. What is the primary purpose of a network hub?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices, while broadcasting traffic to all connected devices
 - D. To control network traffic based on a set of rules
93. What type of wireless encryption is considered the most secure?
- A. WEP
 - B. WPA
 - C. WPA2
 - D. WPA3

94. Which network protocol is used to determine the shortest path between two devices on a network?
- A. OSPF
 - B. BGP
 - C. RIP
 - D. EIGRP
95. Which type of network topology is characterized by having each device connected directly to every other device?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
96. Which of the following is a network device that connects multiple networks with different architectures and protocols?
- A. Gateway
 - B. Switch
 - C. Router
 - D. Firewall
97. What is the primary purpose of a network access control (NAC) system?
- A. To manage network devices
 - B. To control access to the network based on a set of predefined policies
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
98. Which protocol is used to remotely manage network devices?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. ICMP
99. What is the primary purpose of a network IDS (Intrusion Detection System)?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources

100. Which type of network cable is used to connect a network device to a switch or hub?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
101. What is the primary purpose of a network IPS (Intrusion Prevention System)?
- A. To manage network devices
 - B. To monitor network traffic, detect potential security threats, and take action to prevent them
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
102. What is the maximum transmission distance for a 1000BASE-SX Ethernet connection using multimode fiber-optic cable?
- A. 220 meters
 - B. 500 meters
 - C. 2 kilometers
 - D. 5 kilometers
103. Which type of network device is used to connect wireless devices to a wired network?
- A. Wireless access point
 - B. Router
 - C. Switch
 - D. Firewall
104. Which network protocol is used to resolve domain names to IP addresses?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP
105. What is the primary purpose of a network switch?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - D. To control network traffic based on a set of rules

106. Which type of network topology is characterized by having a central device, such as a switch or hub, connecting all other devices?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
107. What is the maximum transmission distance for a single-mode fiber-optic cable?
- A. 2 kilometers
 - B. 10 kilometers
 - C. 40 kilometers
 - D. 100 kilometers
108. Which of the following is used to prevent unauthorized devices from connecting to a wireless network?
- A. SSID broadcasting
 - B. MAC address filtering
 - C. QoS
 - D. NAT
109. What is the primary purpose of a network proxy server?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To act as an intermediary between a client and a server, providing increased security, caching, and/or filtering
 - D. To provide network resources
110. Which of the following is a technique used to reduce the size of a network by dividing it into smaller segments?
- A. Subnetting
 - B. DHCP
 - C. DNS
 - D. ARP

111. What is the primary purpose of a network router?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on IP addresses
 - D. To control network traffic based on a set of rules
112. Which type of network device is used to connect two or more network segments and forward traffic based on MAC addresses?
- A. Network bridge
 - B. Router
 - C. Switch
 - D. Firewall
113. Which protocol is used to synchronize clocks on network devices?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. NTP
114. What is the primary purpose of a network repeater?
- A. To manage network devices
 - B. To amplify a network signal and extend its range
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
115. Which of the following is a method for managing and monitoring network devices remotely?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. ARP
116. What is the primary purpose of a Virtual Private LAN Service (VPLS)?
- A. To provide a secure connection between remote users and a private network
 - B. To extend a LAN across multiple sites using a wide area network (WAN)
 - C. To distribute network traffic across multiple resources

D. To improve network performance

117. Which type of network cable is used to connect devices of the same type, such as a computer to a computer or a switch to a switch?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
118. What is the maximum data rate of the 802.11n standard?
- A. 54 Mbps
 - B. 150 Mbps
 - C. 450 Mbps
 - D. 600 Mbps
119. What is the primary purpose of a network address translation (NAT) device?
- A. To manage network devices
 - B. To allow multiple devices on a private network to share a single public IP address
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
120. Which network protocol is used to provide IP addresses to devices on a network?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP
121. Which of the following is a network device that connects multiple networks and uses routing tables to determine the best path for forwarding packets between networks?
- A. Switch
 - B. Router
 - C. Firewall
 - D. Bridge

122. What is the primary purpose of a network demilitarized zone (DMZ)?
- A. To manage network devices
 - B. To separate public-facing services from the internal network, providing an additional layer of security
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
123. Which of the following is used to provide a secure connection between two devices over an unsecured network?
- A. SSL/TLS
 - B. SNMP
 - C. DHCP
 - D. ARP
124. What is the primary purpose of a network access server (NAS)?
- A. To manage network devices
 - B. To provide a secure connection for remote users
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
125. Which type of network cable is used to connect a computer to an Ethernet network?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
126. What is the primary purpose of a network intrusion prevention system (IPS)?
- A. To manage network devices
 - B. To monitor network traffic, detect potential security threats, and take action to prevent them
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
127. Which of the following is a technique used to prioritize specific network traffic, such as VoIP or video streaming?
- A. MAC address filtering
 - B. Quality of Service (QoS)
 - C. Load balancing
 - D. NAT

128. What type of network device is used to filter and forward traffic based on a set of rules?
- A. Router
 - B. Switch
 - C. Firewall
 - D. Bridge
129. Which network protocol is used to transport email messages between mail servers?
- A. SMTP
 - B. DHCP
 - C. DNS
 - D. ARP
130. What is the maximum transmission distance for a 10GBASE-LR Ethernet connection using single-mode fiber-optic cable?
- E. 2 kilometers
 - F. 10 kilometers
 - G. 40 kilometers
 - H. 100 kilometers
131. What is the primary purpose of a network server?
- A. To manage network devices
 - B. To provide network resources, such as file storage, email, and web services
 - C. To distribute network traffic across multiple resources
 - D. To control network traffic based on a set of rules
132. What type of network device is used to connect multiple devices to a single network segment and broadcast traffic to all connected devices?
- A. Hub
 - B. Router
 - C. Switch
 - D. Firewall
133. What type of network cable is used to connect a computer to a modem?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch

134. What is the primary purpose of a network switch?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - D. To control network traffic based on a set of rules
135. Which type of network topology is characterized by having each device connected directly to every other device?
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 - B. Mesh
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 - D. Ring
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 - C. 1.3 Gbps
 - D. 6.9 Gbps
137. Which of the following is a technique used to increase the available bandwidth on a network by combining multiple physical links into a single logical link?
- A. Load balancing
 - B. Link aggregation
 - C. Quality of Service (QoS)
 - D. Subnetting
138. What is the primary purpose of a network firewall?
- A. To manage network devices
 - B. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - C. To amplify a network signal and extend its range
 - D. To control network traffic based on a set of rules
139. Which network protocol is used to assign IP addresses to devices on a network?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP

140. What is the primary purpose of a network router?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on IP addresses
 - D. To control network traffic based on a set of rules
141. Which of the following is a method for managing and monitoring network devices remotely?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. ARP
142. Which protocol is used to provide secure file transfer over an unsecured network?
- A. FTP
 - B. TFTP
 - C. SFTP
 - D. SCP
143. What is the primary purpose of a network access control (NAC) system?
- A. To manage network devices
 - B. To control access to the network based on a set of predefined policies
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
144. Which of the following is a network device that connects multiple networks with different architectures and protocols?
- A. Gateway
 - B. Switch
 - C. Router
 - D. Firewall

145. What is the primary purpose of a network protocol analyzer?
- A. To manage network devices
 - B. To distribute network traffic across multiple resources
 - C. To monitor and analyze network traffic for troubleshooting and performance analysis
 - D. To provide network resources
146. Which network protocol is used to discover neighboring devices on a network?
- A. SNMP
 - B. LLDP
 - C. NTP
 - D. DNS
147. What is the primary purpose of a Virtual Private Network (VPN)?
- A. To manage network devices
 - B. To provide a secure connection between remote users and a private network
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
148. What type of network device is used to convert an analog telephone signal into digital data that can be transmitted over the internet?
- A. Switch
 - B. Router
 - C. Firewall
 - D. VoIP gateway
149. What is the primary purpose of a network hub?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices, while broadcasting traffic to all connected devices
 - D. To control network traffic based on a set of rules
150. What type of wireless encryption is considered the most secure?
- A. WEP
 - B. WPA
 - C. WPA2
 - D. WPA3

151. Which of the following network devices can be used to segment a network and reduce the amount of broadcast traffic?
- A. Hub
 - B. Switch
 - C. Router
 - D. Repeater
152. What is the primary purpose of a network load balancer?
- A. To manage network devices
 - B. To control access to the network based on a set of predefined policies
 - C. To distribute network traffic across multiple resources to improve performance and reliability
 - D. To improve network performance
153. Which type of network cable is used to connect devices of the same type, such as a computer to a computer or a switch to a switch?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
154. What is the maximum data rate of the 802.11ax (Wi-Fi 6) standard?
- A. 1.2 Gbps
 - B. 3.5 Gbps
 - C. 6.9 Gbps
 - D. 9.6 Gbps
155. Which of the following is a technique used to prioritize specific network traffic, such as VoIP or video streaming?
- A. MAC address filtering
 - B. Quality of Service (QoS)
 - C. Load balancing
 - D. NAT
156. What is the primary purpose of a network switch?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - D. To control network traffic based on a set of rules

157. Which protocol is used to remotely manage network devices?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. ICMP
158. What is the primary purpose of a network IDS (Intrusion Detection System)?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
159. Which type of network device is used to connect wireless devices to a wired network?
- A. Wireless access point
 - B. Router
 - C. Switch
 - D. Firewall
160. Which network protocol is used to resolve domain names to IP addresses?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP
161. What is the primary purpose of a network IPS (Intrusion Prevention System)?
- A. To manage network devices
 - B. To monitor network traffic, detect potential security threats, and take action to prevent them
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
162. What type of network device is used to connect two or more network segments and forward traffic based on MAC addresses?
- A. Network bridge
 - B. Router
 - C. Switch
 - D. Firewall

163. Which protocol is used to synchronize clocks on network devices?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. NTP
164. What is the primary purpose of a network repeater?
- A. To manage network devices
 - B. To amplify a network signal and extend its range
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
165. What is the maximum transmission distance for a 1000BASE-SX Ethernet connection using multimode fiber-optic cable?
- A. 220 meters
 - B. 500 meters
 - C. 2 kilometers
 - D. 5 kilometers
166. Which of the following is a method for managing and monitoring network devices remotely?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. ARP
167. What is the primary purpose of a network proxy server?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To act as an intermediary between a client and a server, providing increased security, caching, and/or filtering
 - D. To provide network resources
168. Which type of network topology is characterized by having a central device, such as a switch or hub, connecting all other devices?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring

169. What is the maximum transmission distance for a single-mode fiber-optic cable?
- A. 2 kilometers
 - B. 10 kilometers
 - C. 40 kilometers
 - D. 100 kilometers
170. Which of the following is used to prevent unauthorized devices from connecting to a wireless network?
- A. SSID broadcasting
 - B. MAC address filtering
 - C. QoS
 - D. NAT
171. What is the primary purpose of a network router?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on IP addresses
 - D. To control network traffic based on a set of rules
172. Which type of network device is used to connect two or more network segments and forward traffic based on MAC addresses?
- A. Network bridge
 - B. Router
 - C. Switch
 - D. Firewall
173. Which protocol is used to synchronize clocks on network devices?
- A. SNMP
 - B. DHCP
 - C. DNS
 - D. NTP
174. What is the primary purpose of a network repeater?
- A. To manage network devices
 - B. To amplify a network signal and extend its range
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources

175. Which of the following is a technique used to reduce the size of a network by dividing it into smaller segments?
- A. Subnetting
 - B. DHCP
 - C. DNS
 - D. ARP
176. What is the primary purpose of a Virtual Private LAN Service (VPLS)?
- A. To provide a secure connection between remote users and a private network
 - B. To extend a LAN across multiple sites using a wide area network (WAN)
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
177. Which type of network cable is used to connect devices of the same type, such as a computer to a computer or a switch to a switch?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
178. What is the maximum data rate of the 802.11n standard?
- A. 54 Mbps
 - B. 150 Mbps
 - C. 450 Mbps
 - D. 600 Mbps
179. What is the primary purpose of a network address translation (NAT) device?
- A. To manage network devices
 - B. To allow multiple devices on a private network to share a single public IP address
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
180. Which network protocol is used to provide IP addresses to devices on a network?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP

181. Which of the following is a technique used to manage the allocation of IP addresses on a network?
- A. IP address pooling
 - B. DHCP
 - C. DNS
 - D. ARP
182. What type of network device is used to convert an analog telephone signal into digital data that can be transmitted over the internet?
- A. Switch
 - B. Router
 - C. Firewall
 - D. VoIP gateway
183. What is the primary purpose of a network hub?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices, while broadcasting traffic to all connected devices
 - D. To control network traffic based on a set of rules
184. Which of the following wireless encryption methods is considered the most secure?
- A. WEP
 - B. WPA
 - C. WPA2
 - D. WPA3
185. Which of the following is a technique used to prioritize specific network traffic, such as VoIP or video streaming?
- A. MAC address filtering
 - B. Quality of Service (QoS)
 - C. Load balancing
 - D. NAT
186. What is the primary purpose of a network switch?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - D. To control network traffic based on a set of rules

187. What is the primary purpose of a network access control (NAC) system?
- A. To manage network devices
 - B. To control access to the network based on a set of predefined policies
 - C. To distribute network traffic across multiple resources
 - D. To improve network performance
188. What type of network device is used to connect wireless devices to a wired network?
- A. Wireless access point
 - B. Router
 - C. Switch
 - D. Firewall
189. What is the primary purpose of a network proxy server?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To act as an intermediary between a client and a server, providing increased security, caching, and/or filtering
 - D. To provide network resources
190. What is the primary purpose of a network bridge?
- A. To manage network devices
 - B. To amplify a network signal
 - C. To connect two or more network segments and forward traffic based on MAC addresses
 - D. To control network traffic based on a set of rules
191. What is the maximum transmission distance for a 1000BASE-T Ethernet connection using Category 5e or higher twisted-pair copper cabling?
- E. 100 meters
 - F. 200 meters
 - G. 500 meters
 - H. 1 kilometer
192. Which network protocol is used to resolve domain names to IP addresses?
- A. DNS
 - B. DHCP
 - C. ARP
 - D. ICMP

193. What is the primary purpose of a network IDS (Intrusion Detection System)?
- A. To manage network devices
 - B. To monitor network traffic and detect potential security threats
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
194. What is the primary purpose of a network repeater?
- A. To manage network devices
 - B. To amplify a network signal and extend its range
 - C. To distribute network traffic across multiple resources
 - D. To provide network resources
195. Which of the following is a technique used to reduce the size of a network by dividing it into smaller segments?
- A. Subnetting
 - B. DHCP
 - C. DNS
 - D. ARP
196. Which type of network topology is characterized by having each device connected directly to two other devices, forming a continuous loop?
- A. Star
 - B. Mesh
 - C. Bus
 - D. Ring
197. What type of network cable is used to connect a computer to a switch or a router to a modem?
- A. Straight-through
 - B. Crossover
 - C. Rollover
 - D. Patch
198. Which of the following is a method for improving network security by separating network resources and limiting access based on predefined policies?
- A. Network segmentation
 - B. Quality of Service (QoS)
 - C. Load balancing
 - D. NAT

199. What is the primary purpose of a network firewall?
- A. To manage network devices
 - B. To provide a connection point for wired network devices and forward traffic based on MAC addresses
 - C. To amplify a network signal and extend its range
 - D. To control network traffic based on a set of rules
200. Which protocol is used to provide secure file transfer over an unsecured network?
- A. FTP
 - B. TFTP
 - C. SFTP
 - D. SCP

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200 NETWORK PLUS QUESTIONS AND ANSWERS

1. A	51. A	101.B	151.C
2. B	52. A	102.A	152.B
3. A	53. A	103.A	153.A
4. A	54. A	104.A	154.D
5. B	55. A	105.C	155.C
6. B	56. A	106.A	156.A
7. D	57. A	107.D	157.B
8. A	58. B	108.B	158.D
9. B	59. A	109.C	159.A.
10. C	60. A	110.A	160.B
11. A	61. A	111.D	161.C
12. C	62. D	112.B	162.D
13. D	63. A	113.C	163.A
14. A	64. B	114.A	164.C
15. A	65. B	115.D	165.B
16. A	66. C	116.C	166.A
17. B	67. D	117.A	167.C
18. A	68. A	118.D	168.A
19. B	69. C	119.B	169.D
20. A	70. C	120.D	170.B
21. B	71. C	121.B	171.C
22. A	72. C	122.B	172.A
23. C	73. D	123.A	173.D
24. C	74. C	124.B	174.B
25. B	75. B	125.B	175.A
26. B	76. A	126.A	176.B
27. B	77. D	127.C	177.B
28. A	78. A	128.A	178.D
29. B	79. B	129.D	179.B
30. C	80. D	130.A	180.B
31. A	81. C	131.B	181.B
32. B	82. B	132.C	182.D
33. A	83. B	133.D	183.C
34. C	84. C	134.B	184.D
35. C	85. B	135.A	185.B
36. C	86. C	136.C	186.C
37. B	87. C	137.B	187.B
38. A	88. B	138.D	188.A
39. C	89. B	139.B	189.C
40. C	90. B	140.C	190.C
41. A	91. D	141.D	191.A
42. C	92. C	142.B	192.A
43. D	93. D	143.C	193.B
44. A	94. A	144.A	194.B
45. B	95. B	145.D	195.A
46. C	96. A	146.B	196.D
47. B	97. B	147.A	197.A
48. A	98. A	148.D	198.A
49. C	99. B	149.A	199.D
50. B	100.A	150.C	200.C