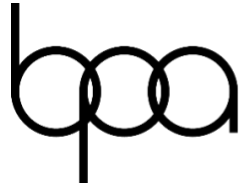


Contestant ID: _____

Time: _____

Rank: _____



**BUSINESS
PROFESSIONALS
of AMERICA**
Giving Purpose to Potential

COMPUTER NETWORK TECHNOLOGY (300)

REGIONAL 2026

CONCEPT KNOWLEDGE:

Multiple Choice (50 @ 2 points each)

_____ (100 points)

Test Time: 60 minutes

GENERAL GUIDELINES.

Failure to follow any of these rules may result in disqualification:

1. **Submission Requirements:** Contestants must submit this test booklet along with any printouts.
2. **Permitted Items:** Only the equipment, supplies, and materials specified for this event are allowed in the testing area. Previous BPA tests and sample tests (whether handwritten, photocopied, or typed) are not permitted.
3. **Electronic Devices:** Electronic devices will be monitored according to ACT standards.

Multiple Choice Questions

Directions: Identify the letter of the choice that best completes the statement or answers the question.

1. Which protocol is used for routing in a TCP/IP internal network?
 - A. HTTP
 - B. FTP
 - C. SNMP
 - D. OSPF
2. What device operates at the Network layer of the OSI model?
 - A. Switch
 - B. Router
 - C. Repeater
 - D. Hub
3. DNS is used for:
 - A. Dynamic Network Services
 - B. Domain Name System
 - C. Data Name Server
 - D. Distributed Networking System
4. WINS is used for resolving:
 - A. MAC addresses to IP addresses
 - B. IP addresses to MAC addresses
 - C. IPv4 addresses to IPv6 addresses
 - D. Domain names to IP addresses
5. Which protocol is commonly used for assigning IP addresses automatically?
 - A. TCP
 - B. FTP
 - C. DHCP
 - D. SMTP
6. Which of the following is a remote access protocol?
 - A. POP3
 - B. SMTP
 - C. ICMP
 - D. SSH
7. What is the function of a network operating system?
 - A. To manage hardware components of a computer
 - B. To interact with users through a graphical interface
 - C. To coordinate network resources and provide services to clients
 - D. To retrieve information from the internet

8. LDAP is an example of a _____.
A. network adapter
B. directory service
C. network protocol
D. network utility
9. What is the primary role of a network switch in a LAN?
A. Connects multiple LANs
B. Filters network traffic
C. Forwards data based on MAC addresses
D. Resolves domain names
10. How does a network adapter differ from a switch in a computer network?
A. Network adapter connects devices to the network
B. Switch forwards data based on IP addresses
C. Network adapter manages network traffic
D. Switch provides wireless connectivity
11. What is the primary function of a network protocol analyzer tool?
A. Assign IP addresses
B. Monitor and analyze network traffic
C. Translate domain names
D. Manage email services
12. Which technology allows for the creation of virtual servers on a physical server to enhance resource utilization?
A. VPN
B. Virtualization
C. Proxy
D. Firewall
13. What is the primary purpose of a network proxy server?
A. Block websites
B. Monitor and filter network traffic
C. Assign domain names
D. Provide email services
14. How does a network switch differ from a hub in a LAN environment?
A. Switch forwards data based on MAC addresses
B. Hub operates at the Network layer
C. Switch connects multiple LANs
D. Hub broadcasts data to all devices

15. What is the primary function of a network DNS server?
 - A. Assigning IP addresses
 - B. Resolving domain names to IP addresses
 - C. Blocking malicious websites
 - D. Handling email transmission
16. Which technology allows users to access network resources securely from remote locations?
 - A. VPN
 - B. Cloud
 - C. Proxy
 - D. Firewall
17. How does a network firewall protect against cyber threats?
 - A. Assigns IP addresses
 - B. Blocks unauthorized access
 - C. Translates domain names
 - D. Provides email services
18. What is the main difference between a LAN and a WAN?
 - A. LANs use wireless connections, while WANs use wired connections
 - B. LANs are limited to a small geographical area, while WANs cover larger geographical areas
 - C. LANs are used for public networks, while WANs are used for private networks
 - D. LANs operate at lower speeds compared to WANs
19. Which protocol is used for transferring files between a client and a server on a network?
 - A. SSH
 - B. FTP
 - C. HTTP
 - D. SMTP
20. What is the purpose of a network router in a computer network?
 - A. Connects devices within a LAN
 - B. Filters network traffic
 - C. Determines the best path for data packets
 - D. Translates domain names to IP addresses
21. Which type of network switch can be configured and managed remotely, allowing for features such as VLANs and QoS?
 - A. Unmanaged switch
 - B. Managed switch
 - C. Hub
 - D. Repeater

22. What is the purpose of Spanning Tree Protocol (STP) in network switches?
- A. To increase the speed of data transmission
 - B. To prevent loops in the network by creating a loop-free logical topology
 - C. To encrypt data packets for secure transmission
 - D. To prioritize certain types of network traffic
23. Which routing protocol uses the Dijkstra algorithm to calculate the shortest path first (SPF) and is commonly used in large enterprise networks?
- A. RIP (Routing Information Protocol)
 - B. OSPF (Open Shortest Path First)
 - C. EIGRP (Enhanced Interior Gateway Routing Protocol)
 - D. BGP (Border Gateway Protocol)
24. What is the primary function of DHCP in a network?
- A. To resolve domain names to IP addresses
 - B. To dynamically assign IP addresses to devices on a network
 - C. To encrypt data packets for secure transmission
 - D. To manage routing tables in routers
25. What is the primary purpose of WINS in a network?
- A. To resolve domain names to IP addresses
 - B. To dynamically assign IP addresses to devices
 - C. To resolve NetBIOS names to IP addresses
 - D. To manage routing tables in routers
26. Which protocol is commonly used for secure communication between a client and a server over the internet?
- A. FTP
 - B. HTTP
 - C. HTTPS
 - D. SMTP
27. Which of the following is a common use case for WINS in a modern network?
- A. Resolving IP addresses for web servers
 - B. Supporting legacy applications that rely on NetBIOS name resolution
 - C. Managing IP address allocation
 - D. Encrypting network traffic

28. **Scenario:** You are a network administrator for a company with multiple branch offices. Each office has its own subnet, and you need to ensure that devices in different subnets can communicate with each other efficiently. Which technology would you implement to allow seamless communication between different subnets?
- A. VLAN (Virtual Local Area Network)
 - B. NAT (Network Address Translation)
 - C. VPN (Virtual Private Network)
 - D. Physical or virtual routers
29. **Scenario:** Your company is experiencing slow network performance during peak hours. After analyzing the network traffic, you find that certain applications are consuming a large amount of bandwidth, affecting other critical services. Which network technology can you use to prioritize critical applications and manage bandwidth usage effectively?
- A. QoS (Quality of Service)
 - B. DHCP (Dynamic Host Configuration Protocol)
 - C. DNS (Domain Name System)
 - D. WINS (Windows Internet Name Service)
30. **Scenario:** You are setting up a new office network and need to ensure that all devices can access the internet securely. Additionally, you want to provide remote access to employees working from home. Which combination of technologies would best meet these requirements?
- A. Firewall and NAT
 - B. DHCP and DNS
 - C. VPN and Firewall
 - D. VLAN and QoS
31. Which protocol does WINS use to communicate between clients and servers?
- A. TCP/IP
 - B. UDP/IP
 - C. NetBIOS over TCP/IP
 - D. HTTP
32. Which port number does DHCP use for client-server communication?
- A. 53
 - B. 67
 - C. 880
 - D. 443
33. Which of the following is a function of TCP/IP subnetting?
- A. Dividing a network into smaller subnetworks
 - B. Encrypting network traffic
 - C. Connecting to wireless networks
 - D. Configuring network adapters

34. When referring to IPv4 and IPv6, what do the "v4" and "v6" signify?
- A. Version 4 and Version 6
 - B. Virtual and Visual
 - C. Vector and Volume
 - D. Voice and Video
35. What are examples of network adapters commonly used in computing devices?
- A. Ethernet, Wi-Fi, Bluetooth
 - B. USB, HDMI, VGA
 - C. SATA, Thunderbolt, FireWire
 - D. NFC, RFID, DVI
36. Which networking component is responsible for forwarding data packets to their destinations?
- A. Router
 - B. Modem
 - C. Switch
 - D. Firewall
37. Which network device is used to segment a LAN into multiple broadcast domains?
- A. Router
 - B. Modem
 - C. Switch
 - D. Firewall
38. Which networking element inspects, and filters incoming and outgoing network traffic based on an applied rule set?
- A. Hub
 - B. Router
 - C. Switch
 - D. Firewall
39. What is the purpose of network cabling in a computer network?
- A. Transmit data between devices
 - B. Power the devices
 - C. Cool the devices
 - D. Secure the devices
40. Which networking component is essential for connecting multiple devices within a LAN?
- A. Switch
 - B. Router
 - C. Modem
 - D. Firewall

41. Which protocol is responsible for translating domain names into IP addresses on the internet?
- A. DNS
 - B. DHCP
 - C. HTTP
 - D. FTP
42. Which network device is used to translate private IP addresses to public IP addresses for internet communication?
- A. Proxy
 - B. Router
 - C. Switch
 - D. Firewall
43. Which protocol is responsible for translating domain names into IP addresses on the internet?
- A. DNS
 - B. DHCP
 - C. HTTP
 - D. FTP
44. What is a common use of Cloud Computing in networking?
- A. Hosting applications and data remotely
 - B. Managing network adapters
 - C. Securing network traffic
 - D. Troubleshooting network issues
45. What does DHCP stand for in networking?
- A. Dynamic Host Configuration Protocol
 - B. Data Handling Control Protocol
 - C. Domain Hosting Configuration Protocol
 - D. Digital Hardware Connection Protocol
46. What is a key feature of network operating systems?
- A. Manage network resources and users
 - B. Process data requests
 - C. Encrypt network traffic
 - D. Analyze network data
47. What are common examples of network operating systems?
- A. Windows Server, Linux
 - B. Windows 10, macOS
 - C. iOS, Android
 - D. Microsoft Office, Adobe Suite

48. Which technology enables wireless internet access within a home environment?
- A. Wi-Fi
 - B. Ethernet
 - C. Bluetooth
 - D. NFC
49. What does TCP/IP stand for in networking?
- A. Transmission Control Protocol/Internet Protocol
 - B. Technical Computer Protocol/Internet Protocol
 - C. Transfer Control Protocol/Internet Protocol
 - D. Transport Connection Protocol/Internet Protocol
50. Which layer of the OSI model is responsible for establishing, maintaining, and terminating connections between systems?
- A. Application
 - B. Presentation
 - C. Session
 - D. Transport