? EASY (10 Questions)

Q1. What is the size of an IPv4 address?
A. 16 bits
B. 32 bits
C. 64 bits
D. 128 bits

Q2. Which IPv4 address class is typically used for private networks?
A. Class A only
B. Class B only
C. Class C only
D. All private ranges

Q3. Which protocol replaces broadcast in IPv6?
A. Unicast
B. Anycast
C. Multicast
D. Loopback

Q4. What does CIDR stand for?
A. Classless Internet Domain Routing
B. Classless Inter-Domain Routing
C. Central Internet Data Routing
D. Class Internet Distribution Rule

Q5. Which IPv6 address represents loopback?
A. fe80::1
B. 2001::1
C. ::
D. ::1

Q6. Which prefix length is standard for IPv6 subnets?
A. /32
B. /48
C. /64
D. /128

Q7. Which address type is used to communicate with the nearest node?
A. Unicast
B. Multicast
C. Anycast
D. Broadcast

Q8. Which IPv4 range is private?
A. 8.8.8.0/24

B. 172.16.0.0/12
C. 224.0.0.0/4
D. 169.254.0.0/16

Q9. Which command checks IP configuration in Windows?
A. netstat
B. route print
C. ipconfig
D. tracert

Q10. Which IPv6 address is automatically assigned for local communication?
A. Global unicast
B. Anycast
C. Link-local
D. Multicast

□ MEDIUM (15 Questions)

Q11. What is the main purpose of subnetting?
A. Increase broadcast traffic
B. Improve IP utilization and security
C. Increase DNS speed
D. Eliminate routing

Q12. Which IPv4 notation replaces classful addressing?
A. NAT
B. CIDR
C. ARP
D. ICMP

Q13. Which IPv6 feature eliminates the need for NAT?
A. Larger address space
B. SLAAC
C. Multicast
D. Anycast

Q14. What is the role of SLAAC in IPv6?
A. Encryption
B. Manual IP assignment
C. Automatic address configuration
D. Routing

Q15. Which IPv6 transition method runs IPv4 and IPv6 simultaneously?
A. Tunneling

B. Translation
C. Dual stack
D. NAT64

Q16. Which layer primarily handles IP addressing?
A. Data Link
B. Transport
C. Network
D. Application

Q17. Which IPv4 address indicates APIPA?
A. 10.0.0.0/8
B. 172.16.0.0/12
C. 192.168.0.0/16
D. 169.254.0.0/16

Q18. Which protocol resolves IP to MAC address?
A. DNS
B. ARP
C. ICMP
D. DHCP

Q19. Which IPv6 address scope is not routable beyond local link?
A. Global
B. Anycast
C. Link-local
D. Multicast

Q20. What is the main advantage of hierarchical IP addressing?
A. Faster encryption
B. Easier routing and scalability
C. Lower bandwidth usage
D. Reduced DNS records

Q21. Which protocol assists in diagnosing network connectivity?
A. FTP
B. ICMP
C. SMTP
D. SNMP

Q22. What is the purpose of a default gateway?
A. DNS resolution
B. Internet access
C. Route traffic outside local network
D. Assign IP addresses

Q23. Which IPv6 prefix is reserved for documentation?
A. fe80::/10
B. ff00::/8
C. 2001:db8::/32
D. ::1/128

Q24. Which addressing method reduces routing table size?
A. Classful addressing
B. Flat addressing
C. CIDR aggregation
D. Static addressing

Q25. Which Windows command displays routing table?
A. ipconfig
B. netstat
C. route print
D. arp -a

🟢 HARD (15 Questions)

Q26. Why is IPv6 more secure by design than IPv4?
A. Larger MTU
B. Built-in IPsec support
C. NAT requirement
D. Faster routing

Q27. Which IPv6 transition technology translates IPv6 to IPv4?
A. ISATAP
B. 6to4
C. Dual stack
D. NAT64

Q28. Why is broadcast eliminated in IPv6?
A. Reduce address size
B. Improve routing speed
C. Reduce network congestion
D. Simplify DNS

Q29. Which addressing strategy is best for large enterprises?
A. Flat addressing
B. Class C networks
C. Hierarchical subnetting
D. Static addressing only

Q30. What happens if duplicate IPv4 addresses exist?
A. Faster routing
B. ARP conflicts and connectivity issues
C. Improved redundancy
D. Automatic correction

Q31. Which IPv6 feature replaces DHCP in many environments?
A. NAT
B. SLAAC
C. ARP
D. ICMP

Q32. Why is /64 recommended for IPv6 subnets?
A. Faster routing
B. SLAAC compatibility
C. Smaller address space
D. Reduced memory usage

Q33. Which IPv4 exhaustion solution is considered temporary?
A. IPv6
B. CIDR
C. NAT
D. Multicast

Q34. Which network design improves fault tolerance?
A. Single core router
B. Flat network
C. Distributed network architecture
D. Static routing only

Q35. Why is IPAM critical in enterprise networks?
A. Improves Wi-Fi speed
B. Prevents IP conflicts and improves tracking
C. Encrypts traffic
D. Replaces DHCP

Q36. Which protocol discovers routers in IPv6?
A. ARP
B. NDP
C. ICMPv4
D. DHCPv4

Q37. What is the role of anycast in content delivery?
A. Broadcast data
B. Reach all nodes

C. Route to nearest server
D. Encrypt traffic

Q38. Which IPv6 address type is used for routing protocols?
A. Global unicast
B. Multicast
C. Link-local
D. Loopback

Q39. Why is NAT discouraged in IPv6?
A. Increases performance
B. Breaks end-to-end connectivity
C. Reduces security
D. Requires DHCP

Q40. Which enterprise practice ensures scalable IP management?
A. Manual IP assignment
B. Flat network design
C. Centralized IPAM with hierarchical addressing
D. Disable IPv6