

Troubleshooting and the Future of Networking: MCQs

1. **Which tool is commonly used to check basic network connectivity?**

- a. Netstat
- b. Ping
- c. FTP
- d. ARP

Answer: b. Ping

2. **Ping uses which protocol?**

- a. TCP
- b. UDP
- c. ICMP
- d. HTTP

Answer: c. ICMP

3. **Which command shows the path a packet takes to a destination?**

- a. ping
- b. tracert/traceroute
- c. ipconfig
- d. nslookup

Answer: b. tracert/traceroute

4. **Which tool can help test if a port is open on a remote host?**

- a. tracert
- b. telnet
- c. ping
- d. nslookup

Answer: b. telnet

5. **What does ICMP stand for?**

- a. Internet Connection Management Protocol
- b. Internet Control Message Protocol
- c. Internal Configuration Management Protocol
- d. Integrated Control Messaging Protocol

Answer: b. Internet Control Message Protocol

6. **Which utility is used to resolve DNS names to IP addresses?**

- a. ping
- b. traceroute
- c. nslookup
- d. netstat

Answer: c. nslookup

7. **Which of the following can help detect broken network paths?**

- a. ipconfig
- b. traceroute
- c. telnet
- d. arp

Answer: b. traceroute

8. **What does DNS stand for?**

- a. Dynamic Naming System

- b. Domain Name Server
- c. Domain Name System
- d. Digital Naming Service

Answer: c. Domain Name System

9. What is the role of a public DNS server?

- a. Encrypt data
- b. Translate domain names to IPs
- c. Host cloud services
- d. Assign MAC addresses

Answer: b. Translate domain names to IPs

10. Google's public DNS server IP is:

- a. 8.8.8.8
- b. 1.1.1.1
- c. 127.0.0.1
- d. 255.255.255.0

Answer: a. 8.8.8.8

11. Which file is used in Windows and Linux to manually resolve hostnames?

- a. route.cfg
- b. host.txt
- c. hosts
- d. dnsmap

Answer: c. hosts

12. Which of these is NOT a reason to edit the hosts file?

- a. Block websites
- b. Speed up local resolution
- c. Test domain before DNS update
- d. Increase bandwidth

Answer: d. Increase bandwidth

13. What happens when a DNS registration expires?

- a. IP changes
- b. Website becomes unreachable
- c. Name is reserved indefinitely
- d. SSL is revoked

Answer: b. Website becomes unreachable

14. What is the cloud in networking?

- a. Physical router
- b. Shared virtual resources over the internet
- c. Satellite communication
- d. A local network

Answer: b. Shared virtual resources over the internet

15. Which of the following is an example of Everything as a Service (XaaS)?

- a. FTP
- b. SaaS
- c. HDMI
- d. NAT

Answer: b. SaaS

16. Cloud storage allows users to:

- a. Compress files
- b. Access files remotely via internet
- c. Format drives
- d. Speed up boot times

Answer: b. Access files remotely via internet

17. Which of the following is a cloud storage provider?

- a. HTTP
- b. Dropbox
- c. ICMP
- d. NAT

Answer: b. Dropbox

18. IPv6 uses how many bits in its address?

- a. 32
- b. 64
- c. 128
- d. 256

Answer: c. 128

19. Which of the following is an example of a valid IPv6 address?

- a. 192.168.1.1
- b. fe80::1
- c. 127.0.0.1
- d. 255.255.255.0

Answer: b. fe80::1

20. What notation does IPv6 use?

- a. Decimal
- b. Binary
- c. Hexadecimal
- d. Octal

Answer: c. Hexadecimal

21. What is the purpose of subnetting?

- a. Increase network speed
- b. Divide a network into smaller segments
- c. Encrypt data
- d. Filter IP packets

Answer: b. Divide a network into smaller segments

22. Which part of an IPv6 address denotes the subnet?

- a. Host ID
- b. Prefix
- c. TTL
- d. Gateway

Answer: b. Prefix

23. Which layer does Ping operate at?

- a. Application
- b. Transport
- c. Network

d. Physical

Answer: c. Network

24. **What is one benefit of IPv6 over IPv4?**

- a. Slower speed
- b. Lower security
- c. Larger address space
- d. Smaller packets

Answer: c. Larger address space

25. **Which address is used for loopback in IPv6?**

- a. 127.0.0.1
- b. fe80::1
- c. ::1
- d. 0.0.0.0

Answer: c. ::1

26. **The ping tool sends what type of message?**

- a. Echo request
- b. ARP reply
- c. TCP SYN
- d. DNS lookup

Answer: a. Echo request

27. **Which tool would you use to troubleshoot DNS issues?**

- a. telnet
- b. nslookup
- c. netstat
- d. ping

Answer: b. nslookup

28. **Which of the following represents "Everything as a Service"?**

- a. XaaS
- b. SaaS only
- c. IaaS only
- d. HTTP

Answer: a. XaaS

29. **Which IPv6 feature allows simultaneous use of IPv4 and IPv6?**

- a. Dual stack
- b. Multicast
- c. Anycast
- d. NAT64

Answer: a. Dual stack

30. **A common reason for failed DNS resolution is:**

- a. Wrong gateway
- b. DNS server down
- c. Cable unplugged
- d. IP conflict

Answer: b. DNS server down

31. **IPv6 does NOT use which of the following?**

- a. NAT

- b. Hexadecimal
- c. 128-bit addressing
- d. Subnetting

Answer: a. NAT

32. **Cloud computing is most associated with which model?**

- a. Client-server
- b. Peer-to-peer
- c. Centralized routing
- d. Distributed systems

Answer: d. Distributed systems

33. **Cloud services are accessed through:**

- a. USB drives
- b. Local disks
- c. Internet
- d. BIOS

Answer: c. Internet

34. **Which IPv6 header field replaces the IPv4 TTL field?**

- a. Next Header
- b. Hop Limit
- c. Flow Label
- d. Traffic Class

Answer: b. Hop Limit

35. **Cloud models include all EXCEPT:**

- a. SaaS
- b. IaaS
- c. PaaS
- d. WAAS

Answer: d. WAAS

36. **Which command lists open ports and active connections?**

- a. netstat
- b. ping
- c. tracer
- d. arp

Answer: a. netstat

37. **The command `ipconfig /flushdns` does what?**

- a. Updates IP address
- b. Resets network adapter
- c. Clears DNS cache
- d. Opens a port

Answer: c. Clears DNS cache

38. **A benefit of cloud storage is:**

- a. Expensive maintenance
- b. Physical backup needed
- c. Access from anywhere
- d. Slower access

Answer: c. Access from anywhere

39. **Which protocol is used to resolve domain names?**

- a. FTP
- b. DHCP
- c. DNS
- d. SMTP

Answer: c. DNS

40. **Which is NOT typically found in IPv6 headers?**

- a. Source address
- b. Destination address
- c. Checksum
- d. Flow label

Answer: c. Checksum

41. **Which IPv6 address type sends to all nodes?**

- a. Unicast
- b. Multicast
- c. Anycast
- d. Broadcast

Answer: b. Multicast

42. **What helps reduce IP exhaustion?**

- a. NAT
- b. IPv6
- c. Subnetting
- d. DHCP

Answer: b. IPv6

43. **What does TTL prevent in IP packets?**

- a. DNS failure
- b. Packet looping
- c. ARP spoofing
- d. IP conflicts

Answer: b. Packet looping

44. **Which command helps detect DNS poisoning?**

- a. netstat
- b. ping
- c. nslookup
- d. tracer

Answer: c. nslookup

45. **IPv6 was introduced to solve which major issue?**

- a. Wi-Fi lag
- b. MAC address spoofing
- c. IP address depletion
- d. VPN speed

Answer: c. IP address depletion

46. **What is a symptom of a failed DNS resolution?**

- a. "Server not found" error
- b. Slow download speed
- c. High ping

d. Wi-Fi disconnected

Answer: a. "Server not found" error

47. **Which protocol does ping use to send messages?**

a. TCP

b. UDP

c. ICMP

d. IPX

Answer: c. ICMP

48. **Which term describes storing software/data in remote servers accessible via the internet?**

a. Local backup

b. NAS

c. Cloud computing

d. HTTP hosting

Answer: c. Cloud computing

49. **Which tool is helpful in analyzing routing issues?**

a. ping

b. tracert

c. ftp

d. telnet

Answer: b. tracert

50. **What is the main function of `hosts` file?**

a. Routing

b. Firewall settings

c. DNS name resolution

d. Port scanning

Answer: c. DNS name resolution