Top 100 Networking MCQs with Answers (Updated) - For LTIMindtree CIS Training Exam

1. Which layer of the OSI model is responsible for routing?
   Answer: Network Layer

2. What does TCP stand for?
   Answer: Transmission Control Protocol

3. Which device operates at Layer 2 of the OSI model?
   Answer: Switch

4. What is the default subnet mask of a Class C network?
   Answer: 255.255.255.0

5. Which protocol translates domain names to IP addresses?
   Answer: DNS

6. Which OSI layer ensures reliable transmission?
   Answer: Transport Layer

7. Which command tests connectivity between hosts?
   Answer: ping

8. Which protocol dynamically assigns IP addresses?
   Answer: DHCP

9. Which IP class has a default mask of 255.255.0.0?
   Answer: Class B

10. Range of private IP addresses in Class C?
    Answer: 192.168.0.0 – 192.168.255.255

11. Which protocol is connection-oriented?
    Answer: TCP

12. How many usable hosts in a /24 network?
    Answer: 254

13. Which device connects different networks?
    Answer: Router

14. Protocol used for file transfer?
    Answer: FTP

15. Purpose of ARP?
    Answer: Maps IP addresses to MAC addresses

16. Which layer handles encryption/decryption?
    Answer: Presentation Layer

17. Function of ICMP?
    Answer: Error reporting and diagnostics

18. Port used by HTTP?
    Answer: 80

19. Protocol for secure web communication?
    Answer: HTTPS

20. Function of default gateway?
    Answer: Routes traffic to other networks

21. What is DNS used for?
    Answer: Resolving domain names to IP addresses

22. Command to check routing path?
    Answer: tracert or traceroute

23. Default mask of Class A?
    Answer: 255.0.0.0

24. Default mask of Class B?
    Answer: 255.255.0.0

25. Default mask of Class C?
    Answer: 255.255.255.0

26. What is CIDR?
    Answer: Classless Inter-Domain Routing

27. What is NAT used for?
    Answer: Translating private IPs to public IPs

28. What is the loopback IP address?
    Answer: 127.0.0.1

29. Which protocol is used for email sending?
    Answer: SMTP

30. Which protocol is used to receive emails?
    Answer: POP3/IMAP

31. Port number of DNS?
    Answer: 53

32. Port number of HTTPS?
    Answer: 443

33. Port number of FTP?
    Answer: 20 and 21

34. Port number of SSH?
    Answer: 22

35. Port number of Telnet?
    Answer: 23

36. Port number of SMTP?
    Answer: 25

37. Port number of POP3?
    Answer: 110

38. Port number of IMAP?
    Answer: 143

39. Which topology uses a central hub?
    Answer: Star Topology

40. Which topology uses a single backbone?
    Answer: Bus Topology

41. Which topology connects nodes in a ring?
    Answer: Ring Topology

42. What is a mesh topology?
    Answer: Every node connects to every other node

43. What is the function of a switch?
    Answer: Connects devices within a LAN

44. What is the function of a hub?
    Answer: Broadcasts data to all ports

45. What is the function of a bridge?
    Answer: Connects two LAN segments

46. What is the function of a router?
    Answer: Routes data between networks

47. What does MAC stand for?
    Answer: Media Access Control

48. Which layer adds MAC address to frame?
    Answer: Data Link Layer

49. What is the MTU of Ethernet?
    Answer: 1500 bytes

50. Which protocol uses the shortest path first algorithm?
    Answer: OSPF

51. What does RIP stand for?
    Answer: Routing Information Protocol

52. What metric does RIP use?
    Answer: Hop count

53. What metric does OSPF use?
    Answer: Cost

54. Which routing protocols support VLSM?
    Answer: OSPF and EIGRP

55. What is a collision domain?
    Answer: Area where data packets collide

56. What device reduces collision domains?
    Answer: Switch

57. What device breaks broadcast domains?
    Answer: Router

58. What is VLAN?
    Answer: Virtual Local Area Network

59. What is STP used for?
    Answer: Preventing loops in a network

60. Which command displays IP configuration in Windows?
    Answer: ipconfig

61. Which command displays IP configuration in Linux?
    Answer: ifconfig/ip addr show

62. What is the default IP of Cisco switches?
    Answer: 192.168.1.1

63. What is ARP used for?
    Answer: Resolving IP to MAC

64. What is RARP used for?
    Answer: Resolving MAC to IP

65. What does SNMP stand for?
    Answer: Simple Network Management Protocol

66. What is used to monitor network devices?
    Answer: SNMP

67. What is ICMP used for?
    Answer: Error reporting and testing connectivity

68. What is the difference between TCP and UDP?
    Answer: TCP is reliable; UDP is faster but unreliable

69. What is the role of a NIC?
    Answer: Connects a computer to a network

70. What is bandwidth?
    Answer: Amount of data transferred per second

71. What is latency?
    Answer: Delay between transmission and reception

72. What is jitter?
    Answer: Variation in packet arrival time

73. What is throughput?
    Answer: Actual data transfer rate

74. What is the function of subnetting?
    Answer: Divides network into smaller subnets

75. What is IPv4 address size?
    Answer: 32 bits

76. What is IPv6 address size?
    Answer: 128 bits

77. What is default gateway?
    Answer: Device connecting internal network to outside

78. What does DHCP Discover do?
    Answer: Broadcasts to find DHCP servers

79. What does DHCP Offer do?
    Answer: DHCP server offers IP to client

80. What does DHCP Request do?
    Answer: Client requests offered IP

81. What does DHCP Acknowledge do?
    Answer: DHCP confirms IP assignment

82. What is APIPA?
    Answer: Automatic Private IP (169.254.x.x)

83. What is difference between unicast and multicast?
    Answer: Unicast one-to-one, multicast one-to-many

84. What is broadcast address of 192.168.1.0/24?
    Answer: 192.168.1.255

85. What protocol is used for time synchronization?
    Answer: NTP

86. What is half-duplex communication?
    Answer: One direction at a time

87. What is full-duplex communication?
    Answer: Both directions simultaneously

88. What is link aggregation?
    Answer: Combining multiple network links for redundancy/bandwidth

89. What is a network?
    Answer: Interconnection of multiple devices for communication

90. What is IP address?
    Answer: Unique logical identifier for each host

91. What is subnet mask?
    Answer: Used to identify network and host parts of IP

92. What is default route?
    Answer: Route used when no other route is available

93. What is TTL in networking?
    Answer: Time To Live - limits packet lifespan

94. What does DNS cache store?
    Answer: Previously resolved domain names

95. What is proxy server?
    Answer: Acts as an intermediary between client and internet

96. What is firewall?
    Answer: Device that filters network traffic based on rules

97. What is QoS?
    Answer: Quality of Service - prioritizing traffic types

98. What is difference between LAN and WAN?
    Answer: LAN is local; WAN is wide area

99. What is difference between hub and switch?
    Answer: Hub broadcasts, switch forwards to specific port

100. What is a data packet?
    Answer: Formatted unit of data transmitted over a network