

Computer Network Suggestions

3 Marks Questions:

1. Role of a router.
2. Function of Repeater.
3. Bridge vs Switch
4. Hub vs Switch
5. Gateway and its uses.
6. Classful vs Classless addressing.
7. Define IP with example.
8. Use of routing table.
9. Static vs Dynamic routing.
10. Purpose of default gateway.
11. Hamming distance between two binary numbers (8 bit)
12. Bit stuffing mechanism with example.
13. Go-Back-N ARQ sliding window protocol and its working.
14. Stop and wait with working.
15. Role of sliding window mechanism.
16. Working of pure-Aloha
17. Working of slotted Aloha.
18. FDMA
19. TDMA
20. CDMA
21. Class A vs Class B vs Class C IP
22. Router vs Gateway
23. Public vs Private IP
24. Consider a Class B IP Find the host for each subnet.
25. Limitations of Classful IP address.
26. Working of ARP & RARP
27. Function of network layers
28. What is static routing?
29. Static vs Dynamic routing
30. Communication system with example.
31. Simplex vs Half Duplex vs Full Duplex
32. Throughput vs Bandwidth
33. Digital and Analog signals advantages and disadvantages.
34. Benefit of resource sharing.

35. LAN, MAN, WAN's advantages and disadvantages
 36. Impact of Latency.
 37. Repeater vs Gateway
 38. Wired vs Wireless
 39. Role of modem
 40. OSI vs TCP/IP
 41. Logical addressing, which layer is responsible for this in OSI.
 42. BUS, Star, Ring advantages and disadvantages
 43. Why we divide layers in OSI or TCP
 44. Role of IP and TCP protocol in TCP/IP.
 45. Example analog and digital
 46. Working of TDM.
 47. Co-axial vs Fiber optic (speed & reliability)
 48. Radio Wave vs Microwave vs Infrared
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5 Marks Questions:

1. IP Address and classification of class full addressing with example
2. Static vs dynamic routing with example
3. Classful vs classless with diagram
4. Need of subnetting how it improves IP address utilization
5. TCP vs UDP with example
6. Significance of routing
7. functions of repeater, hub, switch, bridge
8. IPV4 vs IPV6 (format, feature, limitation)
9. Router vs Gateway (functionality vs usage)
10. What is router, how its forward data between different networks?
11. Quality of network service, parameter of quality of service (any 3)
12. Role of network devices
13. Working of http, explain request response model.
14. WWW function and its component
15. How to firewall protects the network. explain with example
16. Role of digital signature in public key cryptography.
17. Advantage and disadvantage of firewall
18. Private key vs public key cryptography (security efficiency)
19. 3 way handshaking explain
20. Framing in datalink layer. Character stuffing vs bit stuffing
21. Data 1011 divisor 110 Find CRC = ?

22. Hamming code for data = ?
23. Types of transmission errors with examples
24. Aloha
25. Point to point protocol
26. CSMA/CD advantage and disadvantage
27. Analogue vs digital communication
28. Components of a communication systems (Message, Protocol, Sender, Receiver, Channel)
29. 3 important network components and their usage (router, hub, switch)
30. Analogue vs digital transmission (noise, bandwidth, quality)
31. The factor affecting reliability of a communication system.
32. Transmission impairments example and explain the affects
33. LAN VS MAN VS WAN
34. Star and ring (performance and fault tolerance)
35. Hybrid vs other network topologies
36. Impact of topology choice on network performance
37. OSI model and its 7 layers
38. Frame synchronization in Time Division Multiplexing
39. OSI vs TCP/IP (network layer)
40. Bit rate vs Baud rate
41. Bandwidth and its importance
42. Error detection and correction
43. Packet switching and circuit switching
44. TDM vs FDM
45. Different types of guided transmission media with example