

Aryan College

Data Communication and networks

Unit 1

1. What is attenuation? (2017)
2. Define frequency. (2017)
3. Write full form of UTP. (2017)
4. What is band width? (2017)
5. What is simplex communication? (2017)
6. What is baud rate? (2017)
7. What is modem? (2017)
8. Explain guided and unguided transmission media. (2017)
9. Differentiate between parallel and serial transmission mode. (2017)
10. Differentiate between periodic and aperiodic signals. (2017)
11. What is mesh topology? (2016)
12. What is LAN? (2016)
13. What is subnet mask? (2016)
14. Describe network topology. (2016)
15. What is gateway? (2016)
16. Write down difference between hub and switch? (2016)
17. Explain IEEE standards. (2016)
18. What is ipconfig? (2016)
19. Explain error detection. (2016)
20. Write short notes on:
 - a. Fourier analysis concepts
 - b. Protocols
 - c. Topology (2016)
21. Explain time and frequency domain. (2016)
22. What is the use of Switch in networking? (2015)
23. What is multiplexing and demultiplexing? (2015)
24. Discuss full duplex communication. (2015)
25. What is IP address? (2015)
26. What do you mean by network protocol? Discuss. (2015)
27. What is the responsibility of network layer of OSI model? (2015)
28. Discuss and illustrate the architecture of OSI model in detail. (2016,2015,2014)
29. What is the difference between simplex and half duplex? (2014)
30. What is the responsibility of DLL? (2014)
31. Explain link control protocol. (2014)
32. What is the difference between OSI and TCP/IP model? (2014)
33. Explain line configuration technique. What are various topologies of network? Why mesh topology is most reliable network topology? (2014)
34. Explain term bit rate. (2013)
35. Define Cladding. (2013)
36. What is pulse spreading? (2013)
37. Explain term channel bandwidth. (2013)
38. What do you mean by network topology? (2013)
39. Explain full duplex. (2013)
40. Explain guided transmission media. (2013)

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41. What do you understand by data communication? Design architecture for P2P data communication over internet. (2013)

Unit 2

1. What is bit rate? (2016)
2. Explain concept of Digital and Analog signal. (2016, 2015)
3. Why optical fiber Cables are better than other types of cable? (2016)
4. What do you understand by Encoding? Explain digital to analog and analog to digital conversion. (2016)
5. What is Modem? Why it is used in networking? (2015)
6. Define carrier signals and its role in analog transmission. (2015)
7. How guided media differ from unguided media? Explain. (2015)
8. Give advantages of optical fiber over twisted pair and coaxial cable. (2015)
9. What is significance of twisting and twisted pair cable? (2015)
10. Discuss analog to digital conversion technique. Explain PCM and DM technique in brief. (2015)
11. Explain following transmission impairments brief.
 - a. Attenuation
 - b. Distortion
 - c. Noise(2015)
12. What is FM? (2014)
13. What is the use of Baseband Signal? (2014)
14. Write short note
 - a. DTC- DCE interface (2016, 2013)
 - b. EIA 449 (2014)
 - c. EIA 232 (2016, 2013)
 - d. X.21 (2016)
15. "FDDI is better network topology than the traditional ring topology"? Justify the statement. (2014)
16. Describe ASK, FSK, PSK, QAM digital to analog encoding technique using bit sequence and diagram. (2014)
17. What are various digital data transmission techniques? Why digital transmission is better than analog transmission? (2014)
18. What is purpose of digitations? (2013)

Unit 3

1. What is the size of frame check sequence if data word is of k bits and codeword is of n bits cyclic redundancy check? (2017)
2. What is bit stuffing? Explain it. (2017)
3. What is LRC? (2017)
4. Explain modulo arithmetic method and polynomial method of CRC. (2017)
5. What is DHCP? (2016)
6. How would you check cyclic redundancy check? Explain in brief. (2016)
7. What is Parity bit? Why it is important is error detection? (2015,2014)
8. Explain following in brief
 - a. CRC
 - b. Hamming Code
 - c. Burst error correction(2015)
9. What is ISDN and BISDN? (2014)
10. What is the need of CRC and checksum? (2014)
11. What do you understand by multiplexing? Compare FDM and TDM. (2014)

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12. Compare go-back-n ARQ method and selective reject method. (2014)
13. What are error correction and error detection code? Explain one error of detection and one error of correction code with example. (2014,2013)
14. What is normal operation of bit shifting? Why it is used? (2014)
15. Differentiate between DSL and HDLC. (2013)
16. Differentiate between LRC, VRC, and CRC. (2013)
17. Explain architecture of ISDN, also explain the subscriber access to ISDN. (2013)
18. Show AM waveform. How does it differ from FM waveform? When would you prefer AM system and why? (2013)
19. Describe all three division of multiple access with diagram. (2013)

Unit 4

1. Write down any two network layer protocol. (2017)
2. Write down difference between gateway and router. (2017)
3. Explain various packet switching networks. (2017)
4. Explain ATM architecture. (2017)
5. Write brief note on P2P layers. (2016)
6. Explain protocol architecture. (2016)
7. Differentiate switching and routing. (2016)
8. What do you mean by switches? Explain circuit switching. (2016)
9. Differentiate between link control protocol and network control protocol. (2016)
10. Explain Distortion in channel. (2015)
11. Discuss Virtual circuit approach in brief. (2015)
12. What do you mean by ATM? What are the functions of ATM layer? Discuss the working of ATM adaption layer in brief. (2015,2014,2013)
13. Explain term switching. (2014)
14. Give a comparative study of circuit switching message switching and packet switching? Justify answer with advantage and disadvantages of switching types. (2014)
15. What do you understand by the term FDDI? (2013)
16. What is the concept of circuit switching? (2013)
17. Differentiate between:
 - a. Circuit and packet switching
 - b. Link control protocol and network protocol (2013)