

CBCS SCHEME



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17EC64

Sixth Semester B.E. Degree Examination, Feb./Mar. 2022

Computer Communication Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain components of data communication. (06 Marks)
- b. Explain different types of data flow. (06 Marks)
- c. Briefly explain the following : i) ARP ii) OSI versus TCP/IP. (10 Marks)

OR

- 2 a. Define framing. Explain role of bit stuffing in a framing. (10 Marks)
- b. With a neat diagram, explain encapsulation and decapsulation protocol layering. (10 Marks)

Module-2

- 3 a. A slotted ALOHA network transmits 200 bit frame using a shared channel with a 200 Kbps bandwidth. What is the throughput if the system produces,
i) 500 frames per second
ii) 1000 frames per second
iii) 250 frames per second. (10 Marks)
- b. Explain the relationship of the IEEE project 802 standard to the TCP/IP protocol suite. (10 Marks)

OR

- 4 a. What is controlled access? Explain methods of reservation, polling and token passing. (10 Marks)
- b. Explain characteristics and addressing schemes of standard Ethernet. (10 Marks)

Module-3

- 5 a. Explain connecting devices : Hubs and Link Layer Switches. (10 Marks)
- b. Describe architectural and MAC layer features of IEEE 802.11 project. (10 Marks)

OR

- 6 a. Explain classful and classless addressing with example. (10 Marks)
- b. What are the characteristics that can be used to group stations in a VLAN? Explain each. (10 Marks)

Module-4

- 7 a. Draw and explain distance vector routing. (10 Marks)
- b. What are different types of mobile IP, explain them in details, using data transfer diagram. (10 Marks)

OR

- 8 a. Explain the internal structure of unicast routing protocols. (10 Marks)
- b. What is the purpose of designing ICMPv4? And also discuss about types of debugging tools in ICMPv4. (10 Marks)

Module-5

- 9 a. With a neat diagram, explain TCP segment format. (10 Marks)
- b. What are the services provided by UDP? Mention any four typical applications of UDP. Discuss them. (10 Marks)

OR

- 10 a. What are the different services provided by the transport layer? Discuss them. (10 Marks)
- b. Write outline and explain send window and receive window for Go back N protocol. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.