

ONE TIME EXIT SCHEME

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10EC/TE71

Seventh Semester B.E. Degree Examination, April 2018 Computer Communication Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Explain the layered architecture of OSI reference model. (10 Marks)
b. Name the major components of a telephone network. (04 Marks)
c. Explain the operation of ADSL modem. (06 Marks)
- 2 a. Explain Byte stuffing and unstuffing and bit stuffing and unstuffing, with necessary diagrams. (06 Marks)
b. Explain Go – Back – N ARQ protocol. (06 Marks)
c. What are the types of frames in HDLC protocol? Explain each of them briefly. (08 Marks)
- 3 a. Explain CSMA and show the behaviour of the three persistence methods of CSMA. (08 Marks)
b. A network using CSMA/CD has a bandwidth of 10 mbps. If the maximum propagation time is 25.6 μ s, what is the minimum size of the frame? (02 Marks)
c. Discuss the three channelization protocols. (10 Marks)
- 4 a. Explain 802.3 MAC frame format in detail. (10 Marks)
b. Explain MAC layers in IEEE802.11 standards. (10 Marks)

PART – B

- 5 a. Define and explain the working of : i) Repeater ii) Hub iii) Switch iv) Router v) Gateway, with necessary diagrams. (10 Marks)
b. Explain Virtual LAN systems. (10 Marks)
- 6 a. What are the different classes in IPV₄ Addresses? Explain each of them in detail. (08 Marks)
b. Find the class of the following IP Addresses :
i) 00000001 00001011 00001011 11101111.
ii) 11000001 10000011 00011011 11111111. (04 Marks)
iii) 129.14.6.8.
iv) 208.35.54.12.
c. Explain in detail IPV₆ addresses. (08 Marks)
- 7 a. Explain Link State Routing algorithm. (10 Marks)
b. Explain Path Vector Routing algorithm for an inter domain systems. (10 Marks)
- 8 a. Explain each field in TCP segment format. (10 Marks)
b. Explain the services offered by TCP to the processes at the Application Layer. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. All answers should be handwritten and must be legible.