

ONE TIME EXIT SCHEME

USN

1CR14EC066

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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)

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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.