USN | I | M | V | I | O | E | C | I | O | 7 | 10EC/TE71

Seventh Semester B.E. Degree Examination, Dec.2013/Jan.2014
Computer Communication Networks

Time: 3 hrs.   Max. Marks:100

Note: *Answer FIVE full questions, selecting*
at least TWO questions from each part.

PART – A

1 a. How do the layers of TCP/IP model correlate to the OSI model?   (08 Marks)
  b. Explain about I × Cs with a schematic. What are Point of presence?   (06 Marks)
  c. How ADSL could achieve higher data rate over existing local loops? Explain DSLAM.
                                                                              (06 Marks)

2 a. With a frame format, give an elaborate account on HDLC.   (08 Marks)
  b. What is ARQ? Describe in detail about Go-Back-N ARQ.   (08 Marks)
  c. Explain Bit Stuffing with an example.   (04 Marks)

3 a. With a flow diagram, explain CSMA/CD.   (08 Marks)
  b. What is channelization? Give a brief account on CDMA.   (08 Marks)
  c. What are the reasons for poor channel utilization in ALOHA systems? How the same is
     improved in CSMA?   (04 Marks)

4 a. What are the reasons for not implementing CSMA/CD in wireless LANs? With a flowchart
     and frame exchange time line diagram, explain CSMA/CA.   (08 Marks)
  b. What are the advantages of having a Bridged Ethernet?   (06 Marks)
  c. List goals of the Fast Ethernet. Enumerate Fast Ethernet implementations. (06 Marks)

PART – B

5 a. List different connecting devices on the basis of layers they operate.   (04 Marks)
  b. Discuss about looping problem in transparent bridges. How spanning trees help avoid
     looping problem?   (08 Marks)
  c. What are virtual LANs? What is the basis for membership in VLAN? Enumerate advantages
     of having VLANs.   (08 Marks)

6 a. Write a detailed account on IPv6 addresses. Expand the address 0:15::1:12:1213. (10 Marks)
  b. Explain fields pertaining to Fragmentation in IPv4 header.   (06 Marks)
  c. In an IPv4 packet the value of HLEN is 5 and the value of the total length field is 0×0028.
     How many bytes of data are being carried by this packet?   (04 Marks)

7 a. Compare multicasting and multiple unicasting. Discuss multicast distance vector routing.
                                                                              (10 Marks)
  b. What are autonomous systems? Categorize autonomous systems. Give a brief note on BGP
     sessions.   (06 Marks)
  c. Mention the different fields in a typing routing table. What are the significance of Flags
     filed?   (04 Marks)

8 a. Explain connection establishment and connection termination in TCP.   (10 Marks)
  b. Give user datagram format. List uses of UDP.   (06 Marks)
  c. What s FQDN? What is the need for DDNS?   (04 Marks)

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