

--	--	--	--	--	--	--	--	--	--

First Semester M.Tech. Degree Examination, January 2011
Computer Networks

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Based on the types of applications discuss the performance requirements of the computer network. (05 Marks)
 - b. What are the parameters considered for evaluating the performance of a computer network? What is the throughput attained when a 10 MB file is transmitted across 1Gps network with RTT 50 ms? (05 Marks)
 - c. Define the network protocol. Show how protocols are implemented. (10 Marks)
- 2
 - a. What is meant by last – mile buik? How does it compare with leased lines? Give examples of each service. (10 Marks)
 - b. Compare the features of datagram and virtual circuits. With the help of a suitable example show how the VCI table is prepared for a stretched virtual circuit.(SVC) (10 Marks)
- 3
 - a. Explain the spanning tree algorithm, for the extended LAN. Show how the algorithm is implemented. (10 Marks)
 - b. Briefly discuss the ATM cell format. How the segmentation and reassembly are done in ATM? (10 Marks)
- 4
 - a. Show the IP address format and explain how it is used for routing the packet. (06 Marks)
 - b. Briefly discuss the distance vector and link state routing algorithms. Compare their performances. (14 Marks)
- 5
 - a. Explain the TCP variant of sliding window algorithm. Show how this algorithm ensures reliable delivery, ordered delivery and flow control, between the sender and the receiver. (12 Marks)
 - b. Write short note on RPC. (08 Marks)
- 6
 - a. Explain any one congestion control and congestion avoidance algorithm for TCP. (12 Marks)
 - b. What do you understand by the terms effectiveness and fairness with respect to resource allocation? Discuss the basic principle of fair queueing. (08 Marks)
- 7
 - a. What is meant by quality of service (QOS)? What are the mechanisms used for providing QOS? Explain any one in detail. (10 Marks)
 - b. Explain the mail transfer protocol (SMPT), with the help of a block diagram. (10 Marks)
- 8

Write short notes on :

 - a. Domain name server
 - b. Overlay network
 - c. Nultimedia application. (20 Marks)