

# 2002 SCHEME

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CS64

## Sixth Semester B.E. Degree Examination, June 2012 Computer Networks - I

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

1. a. With a neat diagram, explain the layered architecture and design issues in typical computer network. (10 Marks)  
b. Differentiate between broad cast networks and point to point networks. (04 Marks)  
c. What are service primitives? Distinguish between services and protocols. (06 Marks)
2. a. Why is data link layer divided into two sub – layers? Explain with a diagram IEEE 802.3 MAC frame structure. (06 Marks)  
b. What are the functions of transparent bridges? Explain how a transparent bridge learns the presence of another LAN in the network. (06 Marks)  
c. Explain the FDDI token ring network along with its frame format. (08 Marks)
3. a. Explain different issues related to network layer design. (10 Marks)  
b. What are the desirable characteristics of a routing algorithm? What is adaptive and non adaptive routing? (04 Marks)  
c. With an example, explain the working principle of Bellmen Ford algorithm. (06 Marks)
4. a. Discuss at least 2 policies in data link network layer and transport layer that can prevent congestion. (06 Marks)  
b. Explain Random early detection. (04 Marks)  
c. Explain leaky bucket algorithm with a neat diagram. (06 Marks)  
d. Mention any two techniques for achieving good quality of service. (04 Marks)
5. a. With a neat figure, explain IPV4 header format. (06 Marks)  
b. Illustrate with a diagram, the five address formats used in internet. (06 Marks)  
c. Discuss briefly about subnets. (08 Marks)
6. a. List the socket primitives for TCP and briefly explain each primitive. (05 Marks)  
b. What is delayed duplicate problem? How does Tomlinson's algorithm solve this problem? (10 Marks)  
c. Explain silly window syndrome. (05 Marks)
7. a. What is remote procedure call (RPC)? Explain the steps in making RPC. (05 Marks)  
b. What is a TPDU? Give the format of TPDU. (05 Marks)  
c. Explain TCP connection and release phases. (10 Marks)
8. a. Draw the diagram of the ATM cell header format and give a brief description of the various fields. (08 Marks)  
b. Describe any two QOS parameters under the ATM standard. (06 Marks)  
c. Describe the function of ATM adaptation layer. (06 Marks)

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