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NEW SCHEME

First Semester M.Tech. Degree Examination, Dec. 06 / Jan. 07

Advanced Computer Networks

Time: 3 hrs.] [Max. Marks:100

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

1 a. Mention different networking principles that underline the growth of communication network services. Explain each of them. **(10 Marks)**

b. What are hidden terminal and exposed terminal problems? What are the solutions? Explain. **(10 Marks)**

2 a. Define multiplexing. Explain time division multiplexing technique. How does it differ from multiple access? **(10 Marks)**

b. Describe the Ethernet frame structure along with the significance of each field. **(10 Marks)**

3 a. With block diagram explain three generations of packet switches. **(15 Marks)**

b. Explain rate controlled scheduling discipline for guaranteed service connections. **(05 Marks)**

4 a. Explain SONET system and its frame structure. **(10 Marks)**

b. Explain encapsulated protocol data unit (EPDU) of AAL3/4 and AAL5. **(10 Marks)**

5 a. With a neat sketch explain IP header format. **(10 Marks)**

b. Explain the structure of ATM layer. **(10 Marks)**

6 a. What is traffic model? Explain different categories of traffic model. **(10 Marks)**

b Describe M|M|1 basic multiplexer model with the help of M|M|1|K queue and state transition diagram **(10 Marks)**

7 a. With an example explain distance vector routing algorithm. **(10 Marks)**

b. Mention different flow control schemes and explain any one. **(10 Marks)**

8 a. What are the advantages of rate congestion control over window congestion control? **(08 Marks)**

b. Describe statistical procedures for specifying traffic and quality of service and for controlling the network. **(12 Marks)**

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