

B.Tech. Degree VII Semester Examination

November 2005

IT/CS/EC 701 COMPUTER NETWORKS

(2002 Admissions onwards)

Time: 3 Hours

Maximum Marks: 100

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|-----------|------|---|-------------|
| I | a) | Briefly explain the TCP/IP reference model and functions of each layer. | (10) |
| | b) | Briefly explain the BISDN and ATM reference model. | (10) |
| OR | | | |
| II | a) | Briefly explain the OSI-ISO reference model and functions of its layers. | (12) |
| | b) | Explain the following: | |
| | i) | X.25 networks | |
| | ii) | frame relay | (4 x 2 = 8) |
| III | a) | Explain the sliding window protocol with example. | (14) |
| | b) | Discuss and differentiate the functions of hubs, bridges and switches. | (6) |
| OR | | | |
| IV | a) | What is ARP? Explain its functions in detail. | (8) |
| | b) | Explain and compare: | |
| | i) | TDM | |
| | ii) | FDM | |
| | iii) | CDMA | (12) |
| V | a) | Explain briefly how multicast routing is used in internet. | (14) |
| | b) | Explain the purpose of RIP and OSPF protocols | (6) |
| OR | | | |
| VI | a) | Explain IPV ₄ datagram format. | (10) |
| | b) | Discuss the inter autonomous system routing protocol BGP in detail. | (10) |
| VII | a) | What is UDP? Explain its segment structure. | (8) |
| | b) | Discuss the causes and cost of congestion and TCP congestion control algorithm. | (12) |
| OR | | | |
| VIII | a) | What is TCP? Explain with diagram the TCP segment structure. | (12) |
| | b) | Explain how TCP connection management is implemented. | (8) |
| IX | a) | Explain in detail how SNMP is used to manage the network. | (10) |
| | b) | What is Digital Signature? Explain briefly how it is implemented. | (10) |
| OR | | | |
| X | a) | Explain Domain Name System. Explain how file is transferred using FTP. | (12) |
| | b) | Explain RSA and DES cryptographic algorithms. | (8) |