

M.C.A. - SEM-II (choice based)
Computer Networks

22/05/17

72

QP CODE: 08799

(Time: 3 Hours)

Total Marks: 80

Please check whether you have got the right question paper.

- N.B. :** 1) Question No.1 is compulsory.
2) Attempt any three from the remaining five questions.
3) Figures to the right indicate full marks.

1. (a) An organization is granted the block 130.34.12.64/26. The organization needs four subnetworks each with an equal amount of hosts. Design the subnetworks and find the first address, broadcast address, subnet mask and number of addresses in each subnetwork. [10]
- (b) What is inter domain routing? Explain BGP in detail. [10]
2. (a) Discuss the various multiple access protocols in detail. [10]
- (b) (i) Given the data word 101001111 and the divisor 10111, show the generation of the CRC code word at the sender site. [05]
- (ii) We have a channel with a 1MHz bandwidth. The SNR for this channel is 63. What are the appropriate bit rate and signal level? [05]
3. (a) What is link state routing? Explain how the shortest path is calculated using Dijkstra's algorithm with example. [10]
- (b) Explain Go Back N protocol with help of FSM from the sender and receiver perspective [10]
4. (a) Explain how the congestion is controlled by TCP? [10]
- (b) Discuss various queue management algorithms in detail. [10]
5. (a) Discuss about the different types of guided media. [10]
- (b) (i) Explain how the multi cast tree is constructed using various methods. [05]
- (ii) Explain the 4-way handshaking of TCP connection termination. [05]
6. Answer any 4 from the following: [20]
- (a) Explain the terms: Extranet, Intranet and Internet
- (b) Write short notes on IP Over ATM
- (c) Discuss different types of topology with its advantages and disadvantages
- (d) Write short notes on IEEE 802.3