Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME Semester –I Examination Feb. - 2012

Subject code: 712604N **Date: 15/02/2012**
Subject Name: Computer Communication & Networking
Time: 10.30 am – 01.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** Disuse three important bodies that help standardize data communication. **07**
(b) Explain the different layers in the OSI Model. **07**

Q.2 **(a)** Explain the term Bandwidth, Bit rate, Bit interval, & what are its counterpart in an analog signal. **07**
(b) What are the five layers in the TCP/IP Model? What are the principal responsibilities of each of these layers? **07**

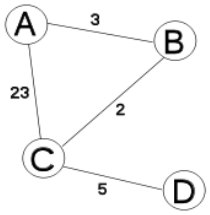
OR

(b) Explain about coaxial cable and fiber optics media for communication. **07**

Q.3 **(a)** Is a data link layer protocol necessary even if there are no bit errors or losses at the physical layer? Why or why not? **07**
(b) Explain "Code Division Multiple Access" multiplexing technology. **07**

OR

Q.3 **(a)** Compare link state routing algorithm with distance vector algorithm. **07**
(b) Consider the network shown below, and assume that each node initially knows the cost of its neighbors. Consider the distance vector routing algorithm and show the distance table entries at node? **07**



1) Define class A, B, C and class D address.
2) Explain subnet mask with an example

Q.4 **(a)** How we control & avoid congestion in TCP. **07**
(b) Explain routing process on mobile host **07**

OR

Q.4 **(a)** What is the difference between datagram subnet and virtual circuit subnet **07**
(b) What is meant by "domain name"? How is a domain name translated to an equivalent IP address? Explain with the help of an example. **07**

Q.5 **(a)** Explain the architecture of e-mail. **07**
(b) Discuss the difference between static and dynamic web document. **07**

OR

Q.5 **(a)** Explain symmetric-key algorithm and also identify functional difference between DES and triple DES **07**
(b) Write short note on Mobile ad-hoc network and sensor network **07**

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