

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-VIII Examination May 2012****Subject code: 181101****Subject Name: Data Communication & Networking****Date: 14/05/2012****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) List the Classification of network in detail according to the area covered. **07**
Also explain each classification of network in detail.
- (b) Draw and Explain the OSI reference model for network. Also gives its application and critiques. **07**

- Q.2** (a) What is mobile telephone system? Explain basic concept of the mobile telephone system. Also explain basic structure of mobile telephone systems. **07**
- (b) Draw and explain the TCP/IP model used for the networks. Also explain the critiques of TCP/IP model **07**

OR

- (b) What is the Public Switched Telephone System? Also explain details of PSTN system. **07**
- Q.3** (a) List the Data Link Layer design issues. What is framing? List all methods used for framing and explain any two methods used for framing in detail. **07**
- (b) List the elementary Data Link Protocol used in network. And explain any two of them in details. **07**

OR

- Q.3** (a) What is congestion control? Why it is required? List all policies used for the congestion control. Explain any two policies used for the congestion control in detail. **07**
- (b) What is Quality of Service? What is its significance? List the techniques available to improve Quality of Service and explain any two of them in detail. **07**

- Q.4** (a) Properly Explain the channel allocation problem. Also explain its solution in detail. **07**
- (b) List the Multiple access protocols used for the wireless network and explain any two of them in detail. **07**

OR

- Q.4** (a) What are the issues available in transport layer list them all and explain each issue in short. **07**
- (b) What are the elements of transport protocol? Explain them all in short. **07**

- Q.5** (a) What is Domain Name System? Explain Recourse records and Name server for the Domain Name System **07**
- (b) What is World Wide Web? Draw and Explain architectural overview of **07**

the World Wide Web.

OR

- Q.5** **(a)** What is cryptography? Explain Symmetric Key Algorithms in detail. **07**
 (b) What is Digital Signature? List the methods used for Digital Signature **07**
 and explain them in detail.
