

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012

Subject code: 141601**Date: 27/12/2012****Subject Name: Data Communication & Networking****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) Explain OSI Model with each Layer in Detail. **07**
(b) Explain various Network Topology with advantages and disadvantages. **07**
- Q.2** (a) Explain ISDN with each channel in details. **07**
(b) Discuss Digital to digital and Analog to analog conversion in brief. **07**
- OR**
- (b) Explain TCP/IP Protocol Suite. **07**
- Q.3** (a) Discuss various Guided and Unguided Media used in communication. **07**
(b) Explain various categories of Network : LAN, WAN, MAN **07**
- OR**
- Q.3** (a) What is Multiplexing? Explain Frequency Division Multiplexing and Time Division Multiplexing. **07**
(b) Explain Pulse Amplitude Modulation and Pulse Code Modulation **07**
- Q.4** (a) Write difference between connection oriented and connectionless service. Explain three way handshake mechanisms for Connection establishment and connection termination. **07**
(b) (i) Explain the use of Modem as DTE & DCE **04**
(ii) Explain various layers of FDDI. **03**
- OR**
- Q.4** (a) List functions of Presentation Layer and explain any two. **07**
(b) (i) Explain Classful IP Addressing scheme for IPV4. **04**
(ii) Difference Between Link State Routing and Distance Vector Routing **03**
- Q.5** (a) Explain Ethernet in details. **07**
(b) (I) Discuss File Transfer Protocol with various ports. **03**
(II) Explain Frame Relay in detail **04**
- OR**
- Q.5** (a) Explain various Error Detection Mechanism in data communication. **07**
(b) (I) Give the Difference Between Switch and Hub **03**
(II) Write short note on (a) Router and (b) Gateway **04**
