

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
