

Seat No.: _____
No. _____

Enrolment

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION – WINTER • 2014

Subject Code: 141601

Date: 22-12-2014

Subject Name: Data Communication and Networking

Time: 02:30 pm - 05:00 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) Discuss Protocols and Standards. List and explain the most important criteria's which a network must be able to meet. **07**
(b) List different connecting devices based on the layer in which they operate in a network and explain them in detail. **07**
- Q.2** (a) Explain TCP/IP Protocol Suite in detail. **07**
(b) Describe Analog to Digital Conversion. **07**
- OR**
- (b) Describe Analog to Analog Conversion. **07**
- Q.3** (a) Explain the duties of transport layer and session layer. **07**
(b) Describe Link state routing with example. **07**
- OR**
- Q.3** (a) Explain Frequency division multiplexing. Also describe multiplexing applications. **07**
(b) Describe Distance vector routing with example. Also explain split horizon and poison reverse. **07**
- Q.4** (a) Explain types of transmission impairment in detail. Also discuss Shannon capacity. **07**
(b) What is Switching? Describe Circuit switched networks. **07**
- OR**
- Q.4** (a) Describe Guided Media and Unguided Media in detail. **07**
(b) Discuss Ethernet and Composite signals in detail. **07**
- Q.5** (a) Explain 56K Modems and Cable Modems. **07**
(b) Describe Checksum in detail with example. **07**
- OR**
- Q.5** (a) Explain Cyclic Redundancy Check with example. **07**
(b) Define the term topology. Describe Star, Bus and Mesh topology. **07**
