

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)
BE (IT) II/IV I Sem (Suppl) Examination May – Jun 2016

Data Communications

Time: 3 Hours

Max Marks:75

Note: Answer all questions from **Section-A** at one place in the same order
 Answer any **five** questions from **Section-B**

Section - A (25 Marks)

- 1 What is the need for a protocol architecture? (2)
- 2 Differentiate analog and digital transmission. (2)
- 3 Differentiate encoding and modulation. (2)
- 4 What are the drawbacks of circuit switching? (2)
- 5 To which layer, CSMA/CD protocol belongs? (2)
- 6 Why spread spectrum technique is used in data communications. (3)
- 7 Differentiate error detection and error correction? List any two error detection techniques. (3)
- 8 What is FDM? (3)
- 9 Give the classification of Switched Communication Networks. (3)
- 10 List any three LAN Topologies. (3)

Section - B (50 Marks)

- 11 (a) Explain in detail about the Four layer architecture of TCP/IP. (4)
- (b) Differentiate between ISO/OSI model and TCP/IP model. (6)
- 12 (a) An Analog signal has a bit rate of 10000 bps and a baud rate of 2000 baud. How many data elements are carried by each signal element? (4)
- (b) Draw **HDLC** frame format and explain each field. (6)
- 13 (a) Explain in detail about Direct Sequence Spread Spectrum (5)
- (b) Differentiate between Synchronous Time Division Multiplexing and Statistical Time Division Multiplexing (5)
- 14 (a) Explain the features and advantages of Frame Relay (5)
- (b) Draw the ATM architecture and explain the layers (5)
- 15 Explain the architecture and services of IEEE 802.11 (10)
- 16 (a) Discuss the characteristics of different types of transmission Media? Which transmission medium is immune to Noise? (6)
- (b) Explain about ADSL. (4)
- 17 Write short notes on the following.
 - (a) Full duplex Ethernets (5)
 - (b) FDMA, TDMA and CDMA (5)
