

Roll No.

24442

**B. Tech 7th Semester (ECE)
Examination – May, 2018**

DATA COMMUNICATION

Paper : ECE-407-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Section. Question No. 1 is compulsory.

1. (a) Differentiate between analog and digital communication systems. 5
- (b) Name standard organization for data communication and explain their functions. 5
- (c) Briefly explain the functions of each layer of OSI model for networking. 5

- (d) Differentiate between intranet & extranet, state examples. 5

SECTION - A

2. Draw & explain the transmitter and the scheme to recover the baseband signal in BPSK. Also, explain the geometrical representation of BPSK signal. 20
3. (a) Draw the blocks of a generalized digital communication system and explain the functions of each block. 10
- (b) What is quadrature amplitude modulation technique ? Draw the transmitter to generate QAM signal and explain. 10

SECTION - B

4. (a) What are the various errors occurring in data communication systems ? Explain that how these error in bits are removed. 10
- (b) Differentiate between serial and parallel interfaces, state examples of each. 10

5. Write notes on : 20
- (i) DDD Network
 - (ii) Synchronous Modems
 - (iii) Modem Synchronization
 - (iv) Telephone circuit.

SECTION - C

6. Explain the complete model of ISDN. State its applications. 20
7. (a) Differentiate between LAN, MAN and WAN. 10
- (b) Define RFID technology. 10

SECTION - D

8. Write notes on : 20
- (i) T-Carriers
 - (ii) AT & T's FDM hierarchy
 - (iii) Time Division Multiplexed carrier System
 - (iv) Frame Synchronization

- (i) TCP/IP reference Model
- (ii) Domain Name Service
- (iii) Combo chips
- (iv) Internet addresses