



(Pages : 2)

1505

Reg. No. : .....

Name : .....

**Sixth Semester B.Tech. Degree Examination, May 2012**  
**(2008 Scheme)**  
**08.606 : DATA COMMUNICATION (R)**

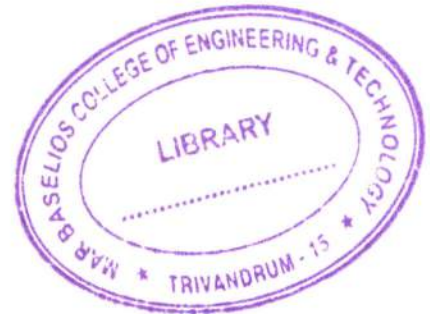
Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. **Each** carries **4** marks.

1. Write any four issues encountered in the design of a data communication system.
2. What do you mean by Nyquist Bandwidth and Shannon's capacity formula ?
3. Define the terms :
  - a) Direct Link
  - b) Point-to-point link
  - c) Full duplex mode
  - d) Half duplex mode
4. Briefly describe Terrestrial Microwave.
5. Briefly explain NRZ-L and NRZ-I schemes for digital to digital Encoding.
6. What do you mean by Bipolar AMI schemes for encoding ? What are its merits and demerits ?
7. Describe the Scrambling technique B8ZS.
8. Explain briefly what do you mean by packet switching.
9. What do you mean by single bit error and burst error ?
10. Briefly explain circuit switching.



P.T.O.



## PART – B

(60 Marks)

## Module – I

11. a) What do you mean by Transmission impairments ? Describe the various Transmission impairments. 15
- b) What are the merits of Digital Transmission systems compared to Analog Transmission systems ? 5

OR

12. a) Explain the structure, applications and Transmission characteristics of twisted fiber and co-axial cable. 10
- b) Describe satellite Communication. 10

## Module – II

13. a) Describe the following : 15
- i) ASK
  - ii) BFSK
  - iii) BPSK
  - iv) DPSK
  - v) MFSK
- b) Describe QPSK. 5

OR

14. a) Explain FDM with suitable diagram. 10
- b) Describe STDM with suitable diagrams. 10

## Module – III

15. a) Describe the CRC method for error detection. Use modulo-2 arithmetic. 12
- b) Describe Hamming codes. 8

OR

16. Write notes on : 20
- a) Forward error corrections
  - b) Block codes
  - c) Comparison of packet switching and circuit switching.
-