



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.





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.
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