



Reg. No. :

Name :

Sixth Semester B.Tech. Degree Examination, March 2015

(2008 Scheme)

08.606 : DATA COMMUNICATION (R)

(Special Supplementary)

Time : 3 Hours

Max. Marks : 100

PART – A

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

1. Give the model of a data communication system and mention the role of each block in the diagram.
2. What do you mean by
 - a) Analog Signal
 - b) Digital Signal
 - c) Absolute Bandwidth
 - d) Effective Bandwidth.
3. Differentiate between simplex, half duplex and full duplex modes of communication.
4. Give any 4 merits of digital transmission system compared to analog transmission system.
5. Describe briefly ASK and BPSK.
6. Explain MFSK.
7. Give the equation for the modulated signal in AM and draw the waveform.
8. Explain briefly use of parity bit for error detection.
9. What do you mean by GPRS ?
10. Differentiate between error detection and error correction. Mention the name of one scheme for each.





PART – B

Module – I

11. a) Describe the general issues of designing a data communication system. 12
 b) Describe important aspects of terrestrial microwave. 8

OR

12. a) Describe the structure, applications and transmission characteristics of optical fiber. 12
 b) Describe different types of noise in data communication. 8

Module – II

13. a) Define sampling theorem. 4
 b) With suitable diagrams explain the pulse code modulation. Also explain non linear sampling and companding techniques used for improving pulse code modulation. 16

OR

14. a) Describe Bipolar AMI and Manchester Encoding Schemes. What are their merits and demerits ? 8
 b) Describe delta modulation giving suitable diagrams. 12

Module – III

15. Describe the following : (10+10)
 a) Hamming codes
 b) Circuit switching

OR

16. Write notes on **any three** :
 a) Block codes
 b) Packet switching
 c) CRC
 d) WiFi.
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