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A – 2880

Reg. No. :

Name :

**Sixth Semester B.Tech. Degree Examination, May 2016
(2008 Scheme)**

08.606 : DATA COMMUNICATION (R)

Time : 3 Hours

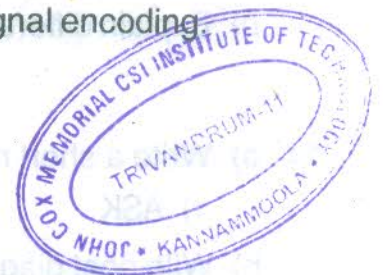
Max. Marks : 100

PART – A

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

(10×4=40 Marks)

1. Discuss the key elements of the simplified data communications model.
2. What are the different types of noises in data communication ?
3. List the key factors that affect the channel capacity.
4. Explain bipolar alternate mark inversion scheme for digital signal encoding.
5. Write a note on delta modulation.
6. What is bandwidth efficiency ?
7. How does two dimensional parity is used in error detection ?
8. Briefly explain hamming codes.
9. Describe message switching.
10. Write a short note on GPRS.



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PART – B

Answer **any one full** question from **each** Module. **Each** question carries **20** marks.
(3×20=60 Marks)

Module – I

11. a) Differentiate between the following types of transmission
- Half duplex and full duplex.
 - Baseband and broadband.
 - Synchronous and asynchronous.
- b) List and explain the key tasks that performed in a data communications system.

OR

12. a) Explain the transmission characteristics that distinguish optical fiber from twisted pair and coaxial cable.
- b) Compare and discuss satellite communication and terrestrial communication.

Module – II

13. a) Describe polar and bipolar encoding techniques.
- b) Explain different methods used for encoding analog data into digital signals.

OR

14. a) Write a short notes on :
- ASK
 - FSK
 - PSK.
- b) With neat diagrams, describe wavelength division multiplexing.

Module – III

15. a) Explain the shift register implementation of CRC with an example.
- b) Explain the difference between datagram and virtual circuit operation.

OR

16. a) Explain the limitations of crossbar switches.
- b) Compare and contrast WiFi WiMax communication.