Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 31300

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Third Semester

Computer Science and Engineering

CS 2204/CS 36/EC 1207/080230008/10144 CS 305 — ANALOG AND DIGITAL COMMUNICATION

(Regulation 2008/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Amplitude Modulation.
2. Differentiate between narrow band and wide band FM signal.
3. What do you mean by FSK?
4. What is M-ary encoding?
5. What do you mean by non-linear encoding in PCM system?
6. What is the advantage of differential PCM?
7. What are the types of data transmission?
8. Mention the usage of scrambler and descrambler.
9. List the types of Spread Spectrum.
10. Differentiate between error detection and correction.

PART B — (5 × 16 = 80 marks)

11. (a) Draw the block diagram of AM Superhetrodyne receiver and explain function of each block.

Or

(b) With the help of a block diagram and theory explain FM demodulation employing PLL.

12. (a) With a neat schematic diagram, explain the balanced ring modulator of BPSK.

Or

(b) (i) Describe the two techniques of achieving carrier recovery circuit.

(ii) Explain in detail about 8 QAM transmitter and receiver.

13. (a) (i) Explain delta modulation with the help of transmitter and receiver diagrams.

(ii) What is Quantizing error? Illustrate with an example.

Or

(b) (i) Explain in detail about ISI and Eye diagram.

(ii) What is meant by companding? Describe the concept of analog companding.

14. (a) With a neat block diagram, explain the concept of UART transceiver operation.

Or

(b) (i) What are parallel interfaces? Describe in detail about centronics parallel interfaces.

(ii) Describe in detail about medium and high speed modems.

15. (a) (i) Describe direct sequence spread spectrum with coherent BPSK.

(ii) Describe Slow and Fast Frequency Hopping.

Or

(b) Describe the structure of feedback shift register for generating PN sequences.

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