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B.TECH DEGREE EXAMINATION, MAY 2012

Fourth Semester

Branch: Computer Science and Engineering

CS 010 404 – COMMUNICATION SYSTEMS (CS)

(Regular – 2010 Admissions)

Time: Three Hours Maximum: 100 Marks

Answer **all** *questions.*

Part A

Each question carries **3** *marks.*

1. Define sampling theorem.
2. Explain basic problems in signal transmissions.
3. What is the need for modulation?
4. Compare the circuit, packet and message switching schemes.
5. What is ASCII code?

(5 x 3 = 15 marks)

Part B

Each question carries **5** *marks.*

6. List the properties of continuous time Fourier transform.
7. Draw and explain the Architecture of a typical communication system.
8. Explain pulse code modulation.
9. Draw the block diagram of Frequency division multiplexing.
10. Explain Baudot and Parity coding.

(5 x 5 = 25 marks)

Part C

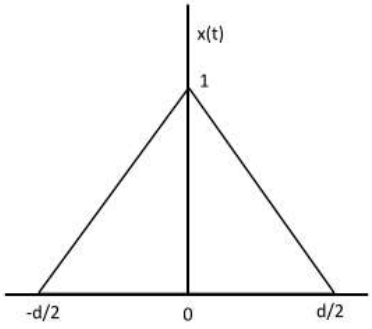
Each full question carries **12** *marks.*

11.

(a) What are the properties of continuous time Fourier series?

Or

(b) Determine the Fourier transform of the signal.



Or

12.

(a) Explain in detail typical parameters of communication systems.

Or

(b) Explain in detail Shannon Hartley theorem.

13.

(a) Explain any *three* types of analog modulation technique.

Or

(b) Explain the following types of modulation schemes. (ASK, FSK)

14.

(a) Explain the following: Simplex, Half Duplex and Full Duplex Transmissions.

Or

(b) Explain the basic ideas on SONET.

15.

(a) Write the following error correction and detection code with example: Convolution coding. Hamming code.

(6 + 6 = 12 marks)

Or

(b) Write short notes on EBCDIC, Bar coding.

(6 + 6 = 12 marks)

(5 x 12 = 60 marks)