



CBCS SCHEME

18MT822

Eighth Semester B.E. Degree Examination, June/July 2023

Communication System

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat block diagram, explain the elements of communication system. (10 Marks)
b. Define modulation. Explain the need for modulation. (10 Marks)

OR

- 2 a. Explain the block diagram of digital communication system. (10 Marks)
b. Write a note on channels in communication system. (10 Marks)

Module-2

- 3 a. With necessary equation and diagram, explain the amplitude modulation in time domain. (10 Marks)
b. Define amplitude modulation. Explain and analyze how the square law modulator generate an AM wave. (10 Marks)

OR

- 4 a. Explain with neat diagram balanced modulator. (10 Marks)
b. Explain with neat diagram Costas Receiver. (10 Marks)

Module-3

- 5 a. With the help of block diagram, explain the working of FM stereo multiplexing. (10 Marks)
b. Explain the non linear model of PLL with relevant block diagram and derivations. (10 Marks)

OR

- 6 a. Explain indirect FM as generation of FM wave. (10 Marks)
b. With relevant block diagram and equation, explain linear model of PLL. (10 Marks)

Module-4

- 7 a. With neat block diagram, explain DPCM transmitter and receiver. (10 Marks)
b. With necessary diagram, explain Time Division Multiplexing. (10 Marks)

OR

- 8 a. With neat diagram, explain pulse code modulation. (10 Marks)
b. With neat diagram, explain delta modulation transmitter and receiver. (10 Marks)

Module-5

- 9 a. Define spread spectrum modulation. Explain the block diagram of spread spectrum system. (10 Marks)
b. With relevant details, explain the generation of pseudo noise sequence. (10 Marks)

OR

- 10 a. With neat diagram and relevant details, explain frequency hop spread spectrum. (10 Marks)
b. Explain direct sequence spread spectrum with coherent BPSK. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.