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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (ECE) (Sem.-5)

**ANALOG AND DIGITAL COMMUNICATION**

Subject Code : BTEC-501-18

M.Code : 78297

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A**

**Answer briefly :**

- 1) Differentiate between Periodic and Aperiodic signals.
- 2) Define modulation index.
- 3) Describe white noise.
- 4) Give the advantages of adaptive delta modulation.
- 5) What is sampling theorem?
- 6) What do you mean by Nyquist criterion?
- 7) Give the expression for probability of statistically independent events.
- 8) Explain random variables.
- 9) Explain the concept of Binary phase shift keying.
- 10) Define the term “Keying” in digital modulation techniques.

### SECTION-B

- 11) Draw and explain the block diagram of phase shift method for the SSB generation.
- 12) What are the various noise considerations in PCM?
- 13) Explain optimum detection of signals in noise.
- 14) Explain continuous phase modulation.
- 15) What are the various methods to detect the PM signals?

### SECTION-C

- 16) Describe Differential pulse code modulation.
- 17) Explain the reception of DSB modulation.
- 18) Give the geometric representation of 16 signals in QAM system.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**