

Roll No.

3090

**B. Tech. 4th Semester (ECE)
Examination – May, 2023**

COMMUNICATION SYSTEM

Paper : PCC-ECE-202-G

Time : Three hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

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| 1. (a) State and prove Sampling Theorem. | 4 |
| (b) Compare PM & FM. | 4 |
| (c) What is Bit rate and Baud rate ? | 3 |
| (d) What are various sources of noise ? | 4 |

UNIT – I

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| 2. (a) Compare analog and digital communication systems. | 8 |
| (b) Discuss various modes of communication. | 7 |

3. Write short notes on : 7
- (a) Pre-Emphasis & De-Emphasis 8
 - (b) Noise Figure and its calculation.

UNIT - II

- 4. (a) Explain QAM. 8
- (b) Discuss VSB modulation. 7
- 5. (a) Discuss Demodulation of FM waves. 8
- (b) Discuss vector representation of FM. 7

UNIT - III

- 6. (a) Explain Tracking and Alignment of Receivers. 7
- (b) Discuss Armstrong FM transmitter. 8
- 7. (a) Explain detection of PWM signal with suitable wave diagram. 8
- (b) Draw and explain working of generation of PPM signal. 7

UNIT - IV

- 8. (a) Explain ASK modulation technique. How it differs with Amplitude Modulation. 8
- (b) Discuss Delta Modulation. 7

9. Write short notes on :

(a) BPSK

(b) DPCM

(c) M. Ary FSK
