G.R. No.	

PAPER CODE	V124-345

March 2024 (INSEM) EXAM
F.Y. B.TECH. COMP. SCIENCE & ENGG. (AI)
(SEMESTER - II)
COURSE NAME: PRINCIPLES OF DATA COMMUNICATION
COURSE CODE: CA12235
(PATTERN 2023)

Time: [40 min]   [Max. Marks: 20]

(*) Instructions to candidates:
1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **Solve any two sub questions from Question 1 and 2**

Question No.	Question Description	Marks	CO mapped	Blooms Taxonomy Level
Q.1	**a)** Illustrate and Explain the Time Domain and Frequency Domain representation of the following: i. Analog signal with Amplitude= 2v, Frequency= 3Hz in time domain. ii. Analog signal with Amplitude= 5v, Frequency= 6Hz in frequency domain. iii. Define periodic and non-periodic digital signals.	[5]	1	Apply
	b) List and Explain the Transmission Impairment factors. Discuss with the help of signal representation how this factor affects the original signal.	[5]	1	Apply
	c) Explain the following Performance Measures with Examples. i) Bandwidth ii) Throughput iii) Latency (delay)	[5]	1	Understand
Q2	**a)** Draw and explain the construction of Fiber-Optic cable. List down the Benefits and Drawbacks of Fiber-Optic cable.	[5]	2	Analyze
	b) Justify the statement "How Microwave Transmission is different than Radio transmission"? Explain Microwave Transmission in Detail.	[5]	2	Analyze
	c) Differentiate between Circuit-switched Networks and Packet-Switched Networks.	[5]	2	Analyze