BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BTECH   **SEMESTER : V**
BRANCH: EEE   **SESSION : MO/2024**

SUBJECT: EE417 FUNDAMENTALS OF COMMUNICATION SYSTEM

TIME: 3 Hours   **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL
Q.1(a)	Prove the Duality Property of Fourier Transform.	[5]	1	Apply
Q.1(b)	Prove that Convolution in Time Domain becomes Multiplication in Frequency Domain.	[5]	2	Analyse
Q.2(a)	Describe the DSBSC Modulation and Demodulation with necessary derivation and Circuit diagram.	[5]	2	Evaluate
Q.2(b)	Explain the Third Method for SSBSC Generation.	[5]	2	Create
Q.3(a)	Describe the Frequency Modulation and Demodulation with necessary derivation and Circuit diagram.	[5]	3	Understand
Q.3(b)	Explain FSK Modulation and Demodulation with necessary circuit diagram.	[5]	4	Evaluate
Q.4(a)	Explain the PCM generation process for the human Voice signal (maximum Frequency 4kHz) with necessary derivation and circuit diagram.	[5]	3	Create
Q.4(b)	Explain FDMA and TDMA.	[5]	3	Remember
Q.5(a)	Describe BPSK and QPSK Generation with necessary circuit diagram.	[5]	4	Evaluate
Q.5(b)	Explain CDMA signal generation and message detection.	[5]	4	Analyse

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