

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023

Subject Code:2161704**Date:10-07-2023****Subject Name:Analog and Digital communication****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Give classification of Noise.	03
	(b) Define following Terminology: (a) Protocol (b) Network (c) Half Duplex (d) Full Duplex	04
	(c) Explain general communication system with block diagram.	07
Q.2	(a) Enlist working principal of fiber optics.	03
	(b) Compare RS 232 standard with RS 422	04
	(c) Explain Data Link Layer Protocols.	07
OR		
	(c) Briefly describe OSI model architecture.	07
Q.3	(a) Give comparison of Amplitude and Frequency modulation.	03
	(b) Explain RS -232 interface standards.	04
	(c) Describe V-Series modems V.34 and V.90.	07
OR		
Q.3	(a) Explain Null Modem.	03
	(b) Compare Wideband FM with narrowband FM.	04
	(c) Explain phase shift keying and application of it in detail	07
Q.4	(a) Explain adaptive delta modulation.	03
	(b) Define: (a) Metropolitan Area (b) Noise (c) Pulse code modulation (d) Cyclic Redundancy check	04
	(c) Explain bit-oriented protocols.	07
OR		
Q.4	(a) Explain parity error detection method.	03
	(b) How does return to zero and non-return to zero binary data forms differ?	04
	(c) What is network topology? Explain different types of network topology in detail.	07
Q.5	(a) Explain Microwave communication.	03
	(b) Explain wireless LANs using CSMA/CA (IEEE 802.11)	04
	(c) Explain different methods of Satellite Communications.	07
OR		
Q.5	(a) Explain GEO, LEO and MEO satellites	03
	(b) Explain Optical Detector in detail.	04
	(c) List different Pulse Modulation Techniques. Explain PWM in detail.	07
