Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VI• EXAMINATION–SUMMER 2015

Subject code: 161704 **Date:14/05/2015**

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.**

Q.1	**(a)**	Discuss multiplexing methods for higher capacity data communication.	**07**
	(b)	Write a note on Pulse Width Modulation.	**07**
Q.2	**(a)**	A career is modulated to a depth of 75 percent. If total power in modulated wave is 512.5 W, calculate carrier power.	**07**
	(b)	With circuit diagram explain importance of pre-emphasis and de-emphasis.	**07**
		OR	
	(b)	How do several amplifying stages in cascade add noise in system?	**07**
Q.3	**(a)**	With sketch explain parity generator. How Parity is useful for error detection?	**07**
	(b)	Mention about “Dual ring network” and “Ring with Sub-ring” with reference to ring topology.	**07**
		OR	
Q.3	**(a)**	Write a note on FSK Modems.	**07**
	(b)	Explain Manchester-Encoded Ethernet data.	**07**
Q.4	**(a)**	Discuss about BISYNC Protocol.	**07**
	(b)	Give basic concepts of light propagation for fiber cable design.	**07**
		OR	
Q.4	**(a)**	Explain cellular topology and security in cellular transmissions.	**07**
	(b)	Write about SONET topology and SONET frame.	**07**
Q.5	**(a)**	Discuss problem of slope overload in delta modulation.	**07**
	(b)	Explain binary ASK and Multilevel ASK for Amplitude Shift Keying.	**07**
		OR	
Q.5	**(a)**	Brief about Adjacent channel and Co-channel interference.	**07**
	(b)	With diagram explain importance of DTE and DCE in data communication.	**07**

****