## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## **BE - SEMESTER-IV EXAMINATION - SUMMER 2016**

Subject Code:141102 Date:10/06 Subject Name:Communication Engineering			5/2016	
	•	:10:30 AM to 01:00 PM Total Marks: 70	)	
		<ol> <li>Attempt all questions.</li> <li>Make suitable assumptions wherever necessary.</li> <li>Figures to the right indicate full marks.</li> </ol>		
Q.1	(a) (b)	What is Modulation and Demodulation? Explain need of Modulation. Explain SSB generation by any one method.	07 07	
Q.2	(a)	Draw block diagram of TV receiver. Mention the functions of each block.	07	
	<b>(b)</b>	Describe in detail basics of communication system with help of necessary block diagram.	07	
	<b>(b)</b>	OR What are the advantages of digital communication over analog communication? Draw and explain the block diagram of PCM system.	07	
Q.3	(a) (b)	Define : [i] Noise Figure [ii] Modulation index [ii] Snail's Law [iv] Dispersion [v] IF [vi] Pick Detector [vii] SNR Explain briefly: PCM, FDM, TDM	07 07	
	(0)	OR	U1	
Q.3	(a) (b)	Discuss losses occurs in fiber optic communication.  Write brief note on optical sources used for optical communication  System.	07 07	
Q.4	(a) (b)	Define Noise. Give classification of Noise and explain any one in detail. Explain the demodulation of AM using envelope detector.  OR	07 07	
Q.4	(a)	Derive the friss formula for overall noise factor of amplifiers in Cascade.	07	
	<b>(b)</b>	Discuss FM Modulation and Demodulation in detail.	07	
Q.5	(a) (b)	Draw and Explain block diagram of superhetrodyne receiver.  Explain satellite communication systems in detail.  OR	07 07	
Q.5	(a) (b)	Explain VSB Modulation in detail.  Explain basic concept of telegraphy in detail.	07 07	

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