Seat No.: Enrolment No GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV(OLD) • EXAMINATION – WINTER 2016 Subject Code: 141102 Date: 24/11/2016 Subject Name: Communication Engineering			
	e:02:3 ctions:	30 PM to 05:00 PM Total Marks: 70	
	2. N	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	What is Modulation and Demodulation? Explain need of Modulation. Compare AM,FM and PM	07 07
Q.2	(a) (b)	Draw and Explain Block Diagram of color TV Receiver What are the advantages of digital communication over analog communication. Draw and explain the block diagram of PCM system. OR	07 07
	(b)	Explain how digital communication can reduce the noise. State and prove the sampling theorem.	07
Q.3	(a) (b)	Discuss choice of modulation for television system. What is modulation system suitable for television? Draw and explain composite video signal. Explain operation of PAL-D TV receiver.	07 07
		OR	
Q.3	(a) (b)	Explain block diagram of television transmitter. Explain luminance (Y) signal, color difference signal and weighted color difference signals I and Q. Why color difference signals R-Y and B-Y are not transmitted directly?	07 07
Q.4	(a)	Compare PAM,PWM and PPM in detail.	07
	(b)	Explain FDM telephony in detail.	07

OR

Draw block diagram of TV receiver. Mention the functions of each block.

Write brief note on optical sources used for optical communication system.

Describe the principle and operation of phase discriminator(foster seely

discriminator) with neat sketch.

Explain Station keeping for satellite.

Explain VSB Modulation in detail.

Explain Terrestrial Microwave Links with example.

Q.4

Q.5

Q.5

(a)

(b)

(a)

(b)

(a)

(b)

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