B. Tech Degree IV Semester (Supplementary) Examination May 2006

IT/CS 405 COMMUNICATION ENGINEERING

(1998 Admissions)

Time : 3 Hours   Maximum Marks : 100

I.	(a)	Explain the need for modulation.	(5)
	(b)	Define AM, derive the equation for AM wave, draw the wave and spectrum.	(8)
	(c)	Draw the circuit diagram of a AM modulator.	(7)

OR

II.	(a)	Compare AM and FM.	(5)
	(b)	Explain the block diagram of FM modulator.	(7)
	(c)	Explain phase shifter method for the generation of SSB.	(8)

III.	(a)	Explain High level and low level modulator, give one example each.	(12)
	(b)	Draw the block diagram of FM receiver.	(8)

OR

IV.	(a)	Explain the working of a SSB Transmitter, compare its performance with DSB Transmission.	(10)
	(b)	Explain the block diagram of ISB Transmitter.	(10)

V.	(a)	Explain various types of FM waves also mention their applications.	(12)
	(b)	Define - (i) radiation resistance (ii) directivity.	(8)

OR

VI.	(a)	What is meant by radiation pattern of an antenna, discuss various types?	(10)
	(b)	(i) Differentiate between Half wave dipole and Quarter wave monopole.	
		(ii) Define beam width and impedance of an antenna.	(10)

VII.	(a)	Explain PAM with neat sketches.	(8)
	(b)	What is meant by Shannon's theorem.	(5)
	(c)	Explain TDM.	(7)

OR

VIII.	(a)	Explain the block diagram of PCM.	(10)
	(b)	Write short notes on error correction and detection codes.	(10)

IX.	(a)	List the advantages and disadvantages of fiber optic communication.	(8)
	(b)	Explain the general block diagram of satellite communication. Briefly explain each individual blocks.	(12)

OR

X.	(a)	Explain various types of fiber structures with neat sketch.	(10)
	(b)	Explain various types of satellites used for communication.	(10)

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