Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - WINTER • 2014

	bject Code: 1/3204 Date: 04-12-2014		
-		Name: Telecommunication Engineering	
Time Instru		0:30 am - 01:00 pm Total Marks: 70	
mstrt	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Define: (1) Erlang (2) Ping-Pong effect (3) CCR (4) BHCA (5) Transit exchange (6) Folded network (7) Grade of Service (GOS)	07
	(b)		07
Q.2	(a)	Give classification of switching systems & In what way is stored program control superior to hard wired control?	07
	(b)	blocking probability.	07
		OR	
	(b)	What are the broad categories of the enhanced services? Discuss three-party Conferencing connection.	07
Q.3	(a)	With the help of block diagram explain Input controlled time division space switch.	07
	(b)	 [1] A subscriber makes three phone calls of three minutes, four minutes and two minutes duration in a hour period. Calculate the subscriber traffic in erlang, CCS and CM. [2] Over a 20-minute observation interval, 40 subscribers initiate calls. Total duration of the calls is 4800 seconds. Calculate the load offered to the network by the subscribers and the average subscriber traffic. OR 	07
Q.3	(a) (b)	Explain in detail with diagrams of Time slot interchange switch (TSI). Discuss Single stage Vs Multi stage Network.	07 07
Q.4	(a) (b)	Classify Signaling technique & Discuss architecture of SS7. Explain in detail level 3 processing of distributed SPC. Also compare micro programmed and hard wired control. OR	07 07
Q.4	(a)	Draw and explain the block diagram of a pulse code modulation system for Speech communication.	07
	(b)	Expalin Time Multiplexed Space Switching.	07
Q.5	(a)	Discuss Markov and Birth-death processes in detail.	07
Q.C	(b)	Draw and explain the basic scheme for Common Channel Signalling. OR	07
Q.5	(a)	Explain in detail LCC system with finite subscribers with derivation of blocking probability and GOS.	07
	(b)	Write a short note on Cellular Mobile Telephony	07
