Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2161009 **Date:17/05/2016**

Subject Name: Telecommunication Switching and Applications

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)**	Explain N × N three stage switching network. Draw the Lee's graph to discuss its blocking probability. Also draw the three stage nonblocking configuration.	**07**
	(b)	Compare centralised data network and distributed data network.	**07**
Q.2	**(a)**	Define folded network and nonfolded network. Draw and explain logical interconnection block diagram for the different elements of a switching system.	**07**
	(b)	Explain basic time division time switching in detail.	**07**
		OR	
	(b)	Discuss the need of combination switching in time division switching. Draw and explain two stage TS switch.	**07**
Q.3	**(a)**	Compare time division time switch and time division space switch.	**07**
	(b)	Define: Busy hour, Time consistent busy hour and grade of service. Explain lost calls cleared system with finite subscribers.	**07**
		OR	
Q.3	**(a)**	Define: Stationary process and ergodic process. Explain B-D process with equations.	**07**
	(b)	Compare satellite communication and terrestrial communication.	**07**
Q.4	**(a)**	Explain Signalling techniques in telephone networks.	**07**
	(b)	Explain System, subsystem, layer in ISO-OSI Model and SAP entity connection modes.	**07**
		OR	
Q.4	**(a)**	Explain token passing ring LAN and Token passing bus LAN.	**07**
	(b)	What are the services supported by ISDN? Explain any two in detail.	**07**
Q.5	**(a)**	Explain the protocol architecture of SS7.	**07**
	(b)	Draw and explain ISDN address structure and ISDN services.	**07**
		OR	
Q.5	**(a)**	What makes ISDN signalling flexible? Why is it that a packet switched network is more suitable than a circuit switched network for ISDN signalling?	**07**
	(b)	Explain parabolic antenna for microwave communication.	**07**

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