Seat No.: _____   **www.FirstRanker.com**   Enrolment No._____ **www.FirstRanker.com**

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI (NEW) EXAMINATION – WINTER 2018

Subject Code: 2161009   **Date:04/12/2018**

Subject Name: Telecommunication Switching and Applications

Time: 02:30 PM TO 05:00 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			MARKS
Q.1	**(a)**	List out the factors limiting subscriber loop length. Discuss the solution to overcome the limitations.	**03**
	(b)	List and explain in short design parameters of switching system.	**04**
	(c)	What is GOS and blocking probability? Explain in detail	**07**
Q.2	**(a)**	Define busy hour, peak busy hour and time consistent busy hour.	**03**
	(b)	What is side tone? How it is essential for telephone circuit? Explain half duplex telephone circuit with side tone coupling.	**04**
	(c)	Discuss briefly about various modes of centralized space division switching.	**07**
		OR	
	(c)	Explain briefly about various levels processing in distributed space division switching.	**07**
Q.3	**(a)**	Explain exchange functions BORSCHT	**03**
	(b)	Explain common channel signaling of telephone network.	**04**
	(c)	Explain Time Multiplexed Time Switching with proper example.	**07**
		OR	
Q.3	**(a)**	List four broad categories of enhanced services provided by SPC	**03**
	(b)	Draw and explain schematic representation of uniselectors.	**04**
	(c)	Derive the Steady state equation for birth-death process in telecommunication network.	**07**
Q.4	**(a)**	List duties of transport layers.	**03**
	(b)	List advantages of ISND.	**04**
	(c)	With block diagram explain basic Time multiplex time switch	**07**
		OR	
Q.4	**(a)**	List duties of network layers.	**03**
	(b)	What is LAN? Discuss various LAN topologies.	**04**
	(c)	Explain the protocol architecture of SS7.	**07**
Q.5	**(a)**	Explain Videotex service.	**03**
	(b)	Discuss functionality of Link to link layers of OSI model.	**04**
	(c)	Discuss about Switching Hierarchy and Routing in telecommunication.	**07**
		OR	
Q.5	**(a)**	Briefly explain LCR system for telephone traffic.	**03**
	(b)	Explain the two types of congestion.	**04**
	(c)	Explain the functionality of network and transport layer in ISO-OSI layer.	**07**

****