

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		
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
