

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:2161103****Date:20-05-2024****Subject Name:Telecommunication Switching systems and Networks****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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Define Grade of service.	03
	(b) Define (a) blocking probability (b) Traffic.	04
	(c) Draw & Explain Strowger Switching System.	07
Q.2	(a) Define: (a) Erlang (b) Peak busy hour.	03
	(b) Compare Strowger switching system and crossbar switching system.	04
	(c) Draw & Explain Distributed SPC.	07
	OR	
	(c) Differentiate between Circuit switching & Packet Switching.	07
Q.3	(a) Write a short note on any one LAN topology.	03
	(b) Compare Inchannel and Common Channel Signaling.	04
	(c) Draw & Explain n-stage combination switching.	07
	OR	
Q.3	(a) Explain in brief: BRI and PRI.	03
	(b) Compare: Micro-programmed control & Hard-wired control.	04
	(c) Discuss basic time division space switching with necessary switch configurations.	07
Q.4	(a) Define connection oriented and connection less protocol.	03
	(b) Detail the operation and working of SS7.	04
	(c) Draw and explain Working of EPABX in brief.	07
	OR	
Q.4	(a) Explain channel association signaling with necessary diagram.	03
	(b) Differentiate single stage and multistage network.	04
	(c) Explain ISO-OSI Reference Model.	07
Q.5	(a) Explain in brief: Data transmission in PSTN.	03
	(b) Explain the load sharing mode of centralized SPC.	04
	(c) Explain Network and Protocol architecture of ISDN.	07
	OR	
Q.5	(a) Explain the working of Touch-tone dialing keypad in telephone.	03
	(b) Explain Enhanced Services of Electronic Space Division Switching.	04
	(c) Explain Cellular Mobile Telephony	07