

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI EXAMINATION – SUMMER 2020

Subject Code: 2161103

Date: 04/11/2020

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.

		MARKS
Q.1	(a) Define the following terms. (i) Grade of Service (ii) Trunks line (ii) Erlang	03
	(b) Differentiate between Manual Switching & Automatic Switching.	04
	(c) Describe Birth-Death process with the help of state transitions in contest of telephone traffic.	07
Q.2	(a) Compare micro-programmed control and hard wired control.	03
	(b) Draw and explain simplex and half-duplex telephone circuits with necessary equations.	04
	(c) Explain Enhanced Services of Electronic Space Division Switching.	07
	OR	
	(c) Explain Three Stage Network in detail.	07
Q.3	(a) Explain BRI and PRI in detail.	03
	(b) Explain 3×3 and 6×6 crossbar switching.	04
	(c) Explain Signaling Techniques used in Telephone Networks.	07
	OR	
Q.3	(a) Compare Inchannel and Common Channel Signaling	03
	(b) Draw and explain Working of EPABX in brief.	04
	(c) Explain Time Multiplexed Space Switching.	07
Q.4	(a) Draw any four Signaling tones in automatic exchange.	03
	(b) Explain Subscriber Loop Systems.	04
	(c) Explain Store and Forward Data Switching Architecture.	07
	OR	
Q.4	(a) What do you mean by Blocking Probability?	03
	(b) Explain Stored Program Control in brief.	04
	(c) Explain Time Multiplexed Time Switching.	07
Q.5	(a) Explain Bit stuffing related to data Link Layer.	03
	(b) Explain Input controlled time division space switching with necessary diagram.	04
	(c) Explain ISDN in detail.	07
	OR	
Q.5	(a) Explain Synchronous duplex mode of Dual processor with necessary diagram.	03
	(b) Differentiate between Circuit switching & Packet Switching.	04
	(c) Explain OSI Model in detail.	07
