Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– II (Old course)• REMEDIAL EXAMINATION – SUMMER 2015

Subject Code: 1720401 **Date:12/05/2015**

Subject Name**: Telecom Switching System, Network and Network Management**

Time: 02:30 pm to 5:00 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)**	What is the significance of side tone in a telephone conversation? Explain a telephone circuit with side tone coupling.	**07**
	(b)	Explain with block diagram elements of switching system	**07**
Q.2	**(a)**	Explain standby mode of dual processor in centralized SPC.	**07**
	(b)	Explain Time slot interchange switch w.r.t Time multiplexed Time Switching.	**07**

<div align="center">OR</div>

	(b)	(i) Define Traffic intensity, CCS and BHCA	**03**
		(ii) Over a 20 minute observation interval, 40 subscribers initiate calls. Total duration of the calls is 4800 seconds. Calculate the load offered to the network by the subscribers and the average subscriber traffic.	**04**
Q.3	**(a)**	Justify that combination switching achieve both time slot interchange and sample switching across trunks.	**07**
	(b)	Derive the expression for availability and unavailability for single and dual processor system.	**07**

<div align="center">OR</div>

Q.3	**(a)**	Explain parallel-in/serial-out configuration of time multiplexed time switching.	**07**
	(b)	Explain TCP/IP based networks. Compare SNA, OSI and internet protocol layer models.	**07**
Q.4	**(a)**	Explain Get Request and Trap protocol data unit in detail with PDU structure.	**07**
	(b)	Explain Architecture of SNMPV3. List the applications of SNMPV3 and explain any two in brief.	**07**

<div align="center">OR</div>

Q.4	**(a)**	Explain monitoring of a total network with individual RMON probes. What are the advantages of RMON?	**07**
	(b)	What are the two approaches available to implement a Web interface on existing SNMP based management system? Explain any one in detail.	**07**
Q.5	**(a)**	Write a short note on Birth-death process.	**07**
	(b)	How dual processor architecture can be configured? Explain any one mode in detail	**07**

<div align="center">OR</div>

Q.5	**(a)**	Discuss three tier organization model and information model in brief.	**07**
	(b)	(i) How Token Ring is different from the Ethernet Protocol?	**03**
		(ii)Discuss privacy and authentication services for an incoming and an outgoing message.	**04**

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