10EC82

USN

Eighth Semester B.E. Degree Examination, June/July 2019 **Digital Switching Systems**

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

		PART – A	
1	a.	With neat block diagram, explain the national telecommunication network.	(06 Marks)
	b.	Explain the different network structures.	(04 Marks)
	c.	Explain the principle of operation of a four wire circuit with neat diagram.	(10 Marks)
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2	a.	Explain the basic functions of a switching system.	(08 Marks)
	b.	Write short note on cross bar switch.	(06 Marks)
	c.	Explain with diagram principle of reed relay switch.	(06 Marks)
	С.	Explain with diagram principle of the array and a	
3	a.	Define the following terms:	
3	a.	(i) Traffic Intensity	
		(ii) Congestion	(06 Marks)
	,	(iii) Busy hour	
	b.	Derive expression for Erlang's Lost call formula with explanation of assumption n	(10 Marks)
		A many of 5 traples is offered 2E of troffic Find	(10 Marks)
	C.	A group of 5 trunks is offered 2E of traffic. Find	
		(i) Grade of service	
		(ii) Probability that only one trunk is busy	
		(iii) Probability that only one trunk is free	(04 Mayles)
		(iv) Probability that atleast one trunk is free.	(04 Marks)
			(10 M - 1)
4	a.	What is Grading? Explain types of grading?	(10 Marks)
	b.	Design a strictly non blocking network for 100 incoming and 100 outgoing tru	inks using
		3-stage network.	(04 Marks)
	C.	Explain the two stage network with equations.	(06 Marks)
		6).	
		PART - B	
5	a.	Explain the principle operation of T-S-T network and S-T-S network.	(10 Marks)
3	b.	Write short note on PBX switches.	(04 Marks)
		Explain frame alignment in detail.	(06 Marks)
	C.	Explain frame angiment in detail.	(0000000)
-		Explain basic software architecture of typical Digital switching system?	(10 Marks)
6	a.	Explain basic software architecture of typical Digital switching system.	(10 Marks)
	b.	Describe the feature flow diagram with flow charts.	(10 1/14/115)
_		End in the most had a large yeard for reporting and correcting of field problems	(10 Marks)
7	a.	Explain the methodology used for reporting and correcting of field problems.	(10 1/141 145)
	b.	Write short note on:	(10 Marks)
		(i) Embedded patcher concept (ii) Firmware software coupling	(10 Marks)
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8	a.	Explain Continue Continue	(10 Mayles)
		(i) Line to trunk inter IC OGT call (ii) Line to trunk intra IC OGT call	(10 Marks)
	b.	Describe the characteristics of DSS?	(10 Marks)

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.