Roll No.

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APR-MAY

B. E. (Seventh Semester) Examination, 2020

(Old Scheme)

(Et & T Engg. Branch)

SATELLITE COMMUNICATION

Time Allowed: Three hours

Maximum Marks: 80

Minimum Pass Marks: 28

Note: Part (a) of each unit is compulsory. Attempt any two parts from (b), (c) and (d) from each unit.

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- 1. (a) What is synchronous orbit?
- 2
- (b) What are the difference between active and passive satellite system? Discuss their merit and demerits.

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	(c)	Explain general & technical characteristics			(b)	Explain the TDMA super frame structure and	
		(structure) of Satellite Communication System.	7			explain how it differs from a simple TDMA figure?	7
	(d)	Explain the earth coverage and slaut range of			(c)	Explain the CDMA system of satellite communica-	
		satellite communication system.	7			tion system.	7
		Unit-II			(d)	Define TDMA and FDMA and write the difference	
2.	(a)	What is system noise temperature?	2			between them.	7
	(b)	Derive the general link design equation. Find out				Unit-IV	
		an expression for C/N and G/T ratios.	7	4.	(a)	What is thermal sub system? (in short)	2
	(c)	Explain the concept of Noise temperature related			(b)	What is the telemetry, tracking and command	
		to satellite link design.	7			(TTC) sub system?	7
	(d)	A sattelite at a distance of 36000 km from the			(c)	Explain the reliability of satellite system.	7
		surface of the earth radiated a power of 4 watt from an antenna of gain 15 DB. Find the this density			(d)	What is structure sub system? What kind of operation does it perform? Which material are	
		and power received by an antenna of effective area 12 m ² & the receiving antenna of has a gain				preffered for the design of sub-system?	7
		of 50 dB then also calculate the receiving power.	7			Unit-V	
		the limit that we missive Unit-III will be all the might be selected.		5.	(a)	Define frequency co-ordination.	2
3.	(a)	TDMA and CDMA stands for what?	2		(b)	Explain monitoring and control regarding satellite	
		328714(28)				earth station. Why is it necessary to have these? 328714(28)	7 го

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(c) Explain with block diagram the working of reco	ives
part of earth station.	
(d) Explain about mobile and transport earth stati	on.
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	(E)
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Explain the reliability of sactions systems	
White is structure sure system? What kind or	
operation does it perform? Which trute it and prefered for the design of subsystem?	
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Define forquency amajolismon	
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