U.S.N

P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Electronics and Communication Engineering

Semester End Examination; Aug. / Sep. - 2020 \ Satellite Communication

	Satellite Communication	
Tir	ne: 3 hrs Max. Marks: 100	
Noi	te: i) Answer TWO full questions, selecting ONE full question from UNIT - I and UNIT - II. ii) Answer any THREE full questions, choosing from UNIT - III, UNIT - IV and UNIT - V.	
	UNIT - I	
1 a.	State and explain the Kepler's law of planatory motion with neat diagram.	
b.	Explain frequency band allocations as per ITU.	
С.	Explain the effects due to non-spherical earth.	
	\mathbf{OR}	
a.	Distinguish Geo stationary and Geo synchronous satellites.	
b.	What are the look angles for the satellite? With the help of suitable diagram and	
	mathematical equations, explain how look angles are determined?	
C.	Explain the following terms with the neat sketch:	
	i) Argument of perigee ii) Right ascension of ascending node	
	UNIT - II	
a.	Explain satellite wide band receiver with a block diagram.	(S):2500 VVOIAPAN
b.	Explain briefly any one form of attitude control.	ĵ
C.	Explain with a block diagram TT and C sub system.	
	OR	
la.	Explain the DBS TV/FM reception with a neat diagram.	
b.	With a block diagram, explain the functioning of transmit receive earth station.	1
	UNIT - III	
a.	What is meant by pre-assigned FDMA? With a neat diagram, explain single channel per carrier.	
b.	Explain in detail the working of code division multiple accesses.	
a.	Explain briefly different types of satellite access.	
b.	Explain the frame and burst formats for a TDMA system.	
	UNIT - IV	
a.	Explain the following transmission losses:	
	i) Feeder losses	
	ii) Antenna misalignment losses	
	iii) Fixed atmospheric losses and ionospheric losses	
b.	Model an expression for down link of satellite circuit.	