Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(Old course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Code: 1710418			Date: 11/12/2015	
Ti	•	Name: Satellite Communication 30 pm to 5:00 pm Total Marks: 7	70	
	1. 2.	Attempt all questions.		
Q.1	(a)	State and explain keplerøs third low. Also describe with the help of required fig	07	
	(b)	and equation how satellite height can found for geostationary orbit. List the definition and terms used for earth orbiting satellite and explain each of them in detail.	07	
Q.2	(a)	Properly explain following terms	07	
	(b)	(A) Orbital perturbation. (B) Atmospheric Drag Determine angle of tilt required for a polar mount used with an earth station at latitude 49 degree north. Assume a spherical earth of mean radius 6371 Km. Here ignore earth-station altitude.	07	
	(b)	OR Find GST for 13hrs UT on 18 December 2000. Here T = 1.00963838.	07	
	(b)			
Q.3	(a)	List the types of antenna used in satellite. Also describe with required fig and equation the look angle determination of antenna.	07	
	(b)	List the types of controls required in the satellite and explain any one of the control in detail.	07	
		OR		
Q.3	(a)	What do you mean by satellite stabilization? List the types of stabilization schemes available and use any one of them in detail.	07 07	
	(b)	Draw and explain the block diagram of transponder in detail.		
Q.4	(a)	What do you mean by Community antenna TV system? With neat sketches properly explain it.	07	
	(b)	List the factors affected in link power budget equation and derived the same equation by using those factors.	07	
0.4	(a)	OR Decreally alshounts the term equivalent features and derived	07	
Q.4	(a)	Properly elaborate the term equivalent Isotropic Radiated Power and derived the equation for the same	07	
	(b)	List the different types of losses occur in the satellite and explain any one of them in detail.	07	
Q.5	(a)	Properly explain with neat sketches the Demand assigned FDMA for satellite. Also give its advantages	07	
	(b)	What do you mean by preamble and post amble also give its significance and requirement.	07	
0.5	(e)	OR Discuss power rating and number of transponder in detail	07	
Q.5	(a) (b)	Discuss power rating and number of transponder in detail. What do you mean by transponder capacity? Also discuss bit rate for digital television in detail.	07 07	
