## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER\_VIII EXAMINATION - SUMMER 2016

		BE - SEMESTER-VIII EXAMINATION - SUMMER 2010		
Subject Code:180104 Date:16/05/20				
Subj	Subject Name: Aircraft Control and Navigation ( Department Elective-II)			
Time:10:30 AM to 01:00 PM Instructions:  Total Marks: 70				
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a)	Explain displacement type longitudinal autopilot with proper diagram. Also mention its advantages and disadvantages.	07	
	<b>(b)</b>	Explain principle of navigation in brief. Also explain its application.	07	
Q.2	(a)	Derive an equation for linear motion of an aircraft.	07	
	<b>(b)</b>	Explain pitch orientation control system with block diagram.  OR	07	
	<b>(b)</b>	Explain outer loop control system and inner loop control system with proper example.	07	
Q.3	(a) (b)	Explain satellite navigation system with example.  Explain automatic approach and landing system of an aircraft with block	07 07	
		diagram.  OR		
Q.3	(a)	Define Dutch roll. Explain damping of Dutch roll with block diagram.	07	
Ų.S	( <b>b</b> )	Explain inertial cross-coupling in brief.	07	
Q.4	(a)	Why flight automatic control system is used in aircraft. Explain principle and application of auto pilot system.	07	
	<b>(b)</b>	Explain flight management system in brief with proper diagram.  OR	07	
<b>Q.4</b>	(a)	Explain dead reckoning principle of navigation in brief.	07	
	<b>(b)</b>	Derive the equation to determine aircraft attitude with respect to earth.	07	
Q.5	(a)	Explain yaw orientation control system with block diagram.	07	
	<b>(b)</b>	Explain acceleration control system with block diagram.  OR	07	
Q.5	(a)	Explain positioning principles and its method in brief.	07	
Ų.J	(a) (b)	Explain glide slope coupler with proper diagram.	07	
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