Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – WINTER 2013

Subject Code: 160106 **Date: 09-12-2013**

Subject Name: Avionics

Time: 02.30 pm - 05.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	With neat sketch explain a system which helps pilot to land an aircraft at night or in low visibility.	**07**
	(b)	How a VOR helps pilot to find direction from and to the airports.	**07**
Q.2	**(a)**	Differentiate difference between HF and VHF wave propagation.	**07**
	(b)	Define-Radial, Bearings, Heading, Track-Made-Good, Required Track, Drift, Magnetic Variation.	**07**
		OR	
	(b)	Explain a system which helps pilot to avoid potential collision with head-on aircrafts on same track.	**07**
Q.3	**(a)**	What is the difference between Traffic Advisory and Resolution Advisory?	**07**
	(b)	How a pilot come to know about weather which has been developed Enroute?	**07**
		OR	
Q.3	**(a)**	What is Iso-Echo observed on Airborne Weather Radar's screen? How does it help pilot to monitor extreme concentration of thunder storm?	**07**
	(b)	What is DME? Why more than 100 aircrafts are not able to identify a single DME station?	**07**
Q.4	**(a)**	Why Helmet Mounted Display (HMD) and Head-Up Display (HUD) are purposeful to improve Avionics Architecture?	**07**
	(b)	With neat sketch explain airport layout which shows location of different avionics transmitters and Radars.	**07**
		OR	
Q.4	**(a)**	Give a short note on Global Positioning System with neat sketch.	**07**
	(b)	Explain the avionics system which helps pilot to monitor Negative Rate of Climb after Take-off.	**07**
Q.5	**(a)**	What is Radio Altimeter? How does it differ than Pressure Altimeter?	**07**
	(b)	If aircraft is flying near coast line at low level, then what type of avionics errors can be occurred?	**07**
		OR	
Q.5	**(a)**	What is Multi Functional Display (MFD)? What types of information can you have from the MFD Screen in conventional Aircrafts?	**07**
	(b)	What tricks are used to minimize size of cockpit of fighter aircrafts? Discuss Avionics architecture of fighter Aircraft's cockpits.	**07**

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