Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII • EXAMINATION – WINTER • 2014

Subject Code: 170105 **Date: 29-11-2014**

Subject Name: Advance Avionics

Time: 10:30 am - 01:00 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)**	Explain need for "Keeping Avionics Cool". Discuss its effect with a graph "Failure rate with Temperature"	**07**
	(b)	Discuss the differences in the requirements of avionics specifications between civil and military aircraft.	**07**
Q.2	**(a)**	Write short note. (Any Two) 1. MIL-STD-1750 2. Document DO- 178 3. MIL-STD-704	**07**
	(b)	What do you understand by fault tolerance system? Explain how it is achieved in avionics architecture.	**07**
		OR	
	(b)	Explain in detail Fault Detection Methodology.	**07**
Q.3	**(a)**	Write short note on 1. Voice recognition 2. Liquid crystal Display	**07**
	(b)	Briefly explain Night vision goggles.	**07**
		OR	
Q.3	**(a)**	Discuss electronics warfare in modern scenario.	**07**
	(b)	What do you understand by Human factor engineering in avionics design process?	**07**
Q.4	**(a)**	Explain the concept of Built In Test Equipment (BITE) in detail.	**07**
	(b)	What is life cycle cost? How is it determined?	**07**
		OR	
Q.4	**(a)**	Explain Cash Flow Analysis	**07**
	(b)	Explain Luminas Flat Panel	**07**
Q.5	**(a)**	Write short note on Multifunction Keyboard	**07**
	(b)	Discuss "Maintenance by Who, Where, When."	**07**
		OR	
Q.5	**(a)**	With help of line diagram explain the principle of "Triplication and Voting" system of "Fault Tolerance Methodology".	**07**
	(b)	What is Software Partitioning? Explain how it has been achieved in case of F-16 Digital Flight Control System.	**07**

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