

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) **07**
1. MIL-STD-1750
 2. Document DO- 178
 3. MIL-STD-704
- (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 **07**
1. Voice recognition
 2. Liquid crystal Display
- (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 “Triplexation 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**
