

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014****Subject Code: 160106****Date: 30-05-2014****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) How Avionics system is useful for communication and navigation purposes for aviation industry? **07**

(b) Explain Long Range Navigation system. How does it help pilot to navigate overseas. **07**

Q.2 (a) Classify types of Instrument Landing System with respect to visibility and Decision Height. **07**

(b) With ILS layout explain how a pilot reaches runway threshold at night. **07**

OR

(b) What is “Cone of Confusion” of VOR wave propagation? How does it create navigation problem during VOR overhead flying? **07**

Q.3 (a) Enlist Satellite Navigation Systems and briefly explain any one. **07**

(b) Differentiate between VOR and NDB navigation. **07**

OR

Q.3 (a) Define VORTAC? How does it protect Military airbase from enemy attack? **07**

(b) Explain two different modes of Airborne Weather Radar. What is Iso-Echo? **07**

Q.4 (a) What is transponder? How does it help Control Radar and Approach Radar? **07**

(b) Classify and explain types of TCAS. How does it help pilot for traffic monitoring and prevents potential traffic collision? **07**

OR

Q.4 (a) Explain the system which warns pilot below 2500 feet above ground level about hazardous proximity. **07**

(b) Explain principle of Head Up Display. How does it help cockpit designers to improve cockpit architecture? **07**

Q.5 (a) What is Helmet Mounted Display? While targeting for attack how does it help pilot to navigate missile to the locked target? **07**

(b) What is Radio Altimeter? How does it help pilot while landing? Why does it over read in very close proximity to runway? **07**

OR

Q.5 (a) Briefly explain Multifunctional Display? How much types of reading you can get through it? **07**

(b) What is Secondary Surveillance Radar? Write its application in identifying friendly aircrafts. **07**
