

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE SEM-VI Examination-Nov/Dec-2011**

**Subject code: 160106**

**Date: 02/12/2011**

**Subject Name: Avionics**

**Time: 10.30 am -1.00 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) What do you understand by avionics systems? For what purposes they are installed in aircrafts and helicopters? **07**
- (b) What are the essential components of ILS? Explain their functions with neat sketch. **07**

- Q.2** (a) What are the advantages and disadvantages of MLS over ILS? **07**
- (b) Differentiate between “head up display” and “head mounted display”. **07**

**OR**

- (b) What are the inputs of “Ground Proximity Warning System”? How does this network work in unsafe flight configurations? **07**

- Q.3** (a) Explain “Tactical Air Navigation System” briefly. **07**
- (b) Differentiate between VOR and VOR-TAC. **07**

**OR**

- Q.3** (a) How GPS system works? How does it find location and speed of aircraft? **07**
- (b) How HF wave propagates? What are the errors in direction finding by HF equipments? **07**

- Q.4** (a) Explain “VHF Omni directional Radio” set used in an aircraft. **07**
- (b) With neat sketch explain cone of confusion of VOR and false glide slope of ILS. **07**

**OR**

- Q.4** (a) What do you mean by “Air Navigation”? **07**
- (b) Differentiate between Primary and Secondary Radar. **07**

- Q.5** (a) How TCAS works in flight? **07**
- (b) How Radio Altimeter works? Which is the main error in Radio Altimeter? **07**

**OR**

- Q.5** (a) How weather is predicted by a pilot by help of “Airborne Weather Radar”? **07**
- (b) Give a short note on in-flight “Distance Measuring Equipments”. **07**

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