Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER–6 • EXAMINATION – SUMMER 2015**

**Subject Code: 160106** **Date:18/05/2015**

**Subject Name: Avionics**

**Time:10.30AM-01.00PM** **Total Marks: 70**

**Instructions:**

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

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|---|---|---|---|
| **Q.1** | **(a)** | Explain application of Avionics equipments in civil and military aviation. | **07** |
| | **(b)** | Explain onboard weather monitoring system with neat sketches. | **07** |
| **Q.2** | **(a)** | Draw layout of Instrument Landing System. Explain functions of components of ILS. | **07** |
| | **(b)** | What are applications of GPS in Aviation services? | **07** |
| | | **OR** | |
| | **(b)** | How an aircraft becomes safe from potential head-on collision with other aircrafts? Explain concern equipments. | **07** |
| **Q.3** | **(a)** | Explain a system which helps pilot to identify threat while flying at low level below 2500 feet above ground level. | **07** |
| | **(b)** | Explain VHF navigation VOR system. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | Explain on-board and off-board HF navigation system of ADF-NDB. | **07** |
| | **(b)** | With neat sketch explain HF wave propagation of NDB. | **07** |
| **Q.4** | **(a)** | With neat sketch explain Head-Up display. | **07** |
| | **(b)** | Explain Multifunction display briefly. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Explain Helmet Mounted display. How does it help a fighter pilot to locate a target and guide a missile? | **07** |
| | **(b)** | Discuss NDB wave propagation errors with neat sketches. | **07** |
| **Q.5** | **(a)** | Explain SSR. How is it better than Primary Radars? | **07** |
| | **(b)** | Shortly explain Flight Management System with either block diagram or neat sketches. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | What is DME? With which avionics DME is integrated? | **07** |
| | **(b)** | Explain VOR-TAC. What is Tactical Air Navigation? | **07** |

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