

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER – VI (OLD).EXAMINATION – WINTER 2016**

**Subject Code: 160106****Date: 25/10/2016****Subject Name: Avionics****Time: 10:30 AM to 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.

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|-----------|---|--|----|
| Q-1       | A | Plot screen of airborne weather radar. And explain color coding of the screen.   | 07 |
|           | B | Explain function of GPWS with block diagram.   | 07 |
| Q-2       | A | What types of information a pilot can get from GPS? How GPS navigation is different than VOR Navigation?                                       | 07 |
|           | B | Explain Quadrantal error, Site error and Coastal error of NDB wave propagation with neat sketch.   | 07 |
| <b>OR</b> |   |  |    |
|           | B | Draw dial of ILS system and explain how a pilot judges about position of aircraft while approaching for landing?                               | 07 |
| Q-3       | A | Explain wave propagation of VOR subject to reference signal and variable signal. How is it different than DVOR?                                | 07 |
|           | B | What is the role of Radio altimeter in Ground Proximity Warning System?  | 07 |
| <b>OR</b> |   |  |    |
|           | A | Differentiate between VOR and VORTAC.  | 07 |
|           | B | Differentiate between VOR and NDB Navigation.  | 07 |
| Q-4       | A | What is the need of head up display? How does it improve cockpit architecture?   | 07 |
|           | B | How head up display is different than Helmet mounted display? What type of work can be performed by a fighter pilot by helmet mounted display? | 07 |
| <b>OR</b> |   |  |    |
|           | A | Shortly explain SATCOM.  | 07 |
|           | B | Shortly explain Long Range Navigation system.  | 7  |
| Q-5       | A | Explain Gyro based Navigation system of aircraft with neat sketches.   | 07 |
|           | B | Explain the system which prevents head on collision of aircrafts.  | 07 |
| <b>OR</b> |   |  |    |
|           | A | Explain Flight Management System with suitable block diagram.  | 07 |
|           | B | Explain normal and reverse sensing of avionics navigation systems.   | 07 |

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