

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: 130104**Date: 10-01-2013****Subject Name: Introduction of Profession Aeronautical Engineering****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) What do you understand about a word Aeronautical Engineering? **07**
(b) What are the main parts of aircraft? Shortly explain their functions. **07**
- Q.2** (a) What is Airfoil? Explain Bernoulli's principle for the generation of lift? **07**
(b) What do you understand by landing gear? Explain Tricycle type landing gears. **07**
- OR**
- (b) What type of Gas Turbine engines are used in aircrafts? Explain any one of them. **07**
- Q.3** (a) What are limitations of using I.C. engines in aircrafts? **07**
(b) What are main components of aircraft wing structure? Briefly explain with neat sketch. **07**
- OR**
- Q.3** (a) Explain main components of semi monocoque fuselage structure with neat sketch. **07**
(b) Explain main components of truss type fuselage structure with neat sketch. **07**
- Q.4** (a) What do you understand by aviation electronics? Enlist electronic instruments using in aircrafts. **07**
(b) Give a short note on VOR. **07**
- OR**
- Q.4** (a) With neat sketch of ILS layout explain glide slope and Localizer transmitters. **07**
Q.4 (b) What are primary and secondary radar? How are they used in civil and military aviation? **07**
- Q.5** (a) What is Distance Measuring Equipment? Why is it located with Glide slope instead of Localizer? **07**
(b) Explain starting procedure of gas turbine engine. **07**
- OR**
- Q.5** (a) What are main functions of Elevators, ailerons and rudder? **07**
(b) What are main functions of flaps, Trim tabs, spoilers and air brakes? **07**
