

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: 130104**Date: 07-12-2013****Subject Name: Introduction to Profession****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) Explain difference between Primary and Secondary Radar. **07**
(b) Classify rotary engines used for civil and military aviation services **07**
- Q.2** (a) Explain “VHF Omni directional Range” in brief. **07**
(b) What are the different types of altitudes in ISA? Briefly explain pressure, temperature and density altitudes. **07**
- OR**
- (b) What are the operational facilities provided by Air-Traffic Management service at an airfield? And briefly explain different elements of an Instrument Landing System (ILS). **07**
- Q.3** (a) Explain “Radio Receiver” with block diagram. **07**
(b) With help of neat sketch explain working of Turbo-fan engine. **07**
- OR**
- Q.3** (a) Explain “Turbo Shaft Engine” with neat sketch and its application. **07**
(b) Explain “Radio Transmitter” with block diagram. **07**
- Q.4** (a) Explain utilities and working principle of pitot tube and pitot- static tube with help of suitable diagram with instruments connected. **07**
(b) Explain three axis of aircraft and forces acting on an aircraft with figure briefly. **07**
- OR**
- Q.4** (a) Enlist avionics equipments used in aircraft. How are they helpful for direction finding and landing in poor weather conditions. **07**
(b) With help of neat sketch explain aerofoil nomenclature. **07**
- Q.5** (a) Explain difference between “retractable landing gears.” and “fixed landing gears” with main components. **07**
(b) With neat sketch explain transport aircraft wing structure. **07**
- OR**
- Q.5** (a) With neat sketch explain transport aircraft fuselage structure. **07**
(b) Explain difference between “Reciprocating engines” and “Rotary engines”. **07**
