

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– III EXAMINATION – SUMMER 2015

Subject Code: 130104

Date: 09/06/2015

Subject Name: Introduction of Profession

Time: 02.30pm-05.00pm

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 axis of aircraft with figure .How angle of attack is important during takeoff & flight operation. **07**
(b) Explain nomenclature of airfoil and explain how airfoil shape generates the lift. **07**
- Q.2** (a) Explain Aileron structure, operation and axis of operation. Why they are mounted on out board wing **07**
(b) Why and how crew cabin & passenger compartments are pressurized ? Explain in briefs . **07**
- OR**
- (b) Define Critical Mach Number, pitot pressure, Integral fuel tank & Oleo. **07**
- Q.3** (a) Describe aviation fuel (requirements) properties. **07**
(b) What do you understand by primary and secondary radar, differentiate them? **07**
- OR**
- Q.3** (a) Describe different methods of mounting wings on fuselage with figure. Explain structure of transport aircraft wing. **07**
(b) Write physics of atmosphere with different regimes. How it is useful in aviation. **07**
- Q.4** (a) What do you understand by basic aerodynamic? **07**
(b) Explain airfoil nomenclature with figure. What is airfoil? **07**
- OR**
- Q.4** (a) Describe Purpose of landing gears, types and configuration, **07**
(b) Explain operation and principle of reciprocating engine. **07**
- Q.5** (a) Explain aircraft load acting during flight. **07**
(b) What do you understand by stresses? Explain with examples and figure. **07**
- OR**
- Q.5** (a) Describe aircraft stability. What is dynamic and static stability? **07**
(b) Write origins of radio and explain avionics history in brief. **07**
