

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-III Regular / Remedial Examination December 2010

Subject code: 130104

Subject Name: Introduction of Profession

Date: 20 /12 /2010

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) With help of neat sketch explain aerofoil nomenclature. 07  
(b) Draw an isometric view of a commercial jet aircraft and show different elements of aircraft. 07
- Q.2 (a) Explain three types of aircraft structures with neat sketch. 07  
(b) Explain “Turbo Fan Engine” with neat sketch. 07
- OR**
- (b) Explain “Turbo shaft Engine” with neat sketch. 07
- Q.3 (a) Differentiate between “Reciprocating engines” and “Rotary engines”. 07  
(b) Explain functions with primary control surfaces with neat sketch. 07
- OR**
- Q.3 (a) Explain three axis and four forces acting upon an aircraft. 07  
(b) How lift is generated over an aerofoil sections? Explain with neat sketch. 07
- Q.4 (a) Draw a fuseledge structure and explain functions of components of a fuseledge. 07  
(b) Explain “Radio Transmitter” with block diagram. 07
- OR**
- Q.4 (a) Draw a wing structure and explain function of components of wings. 07  
(b) Explain “Radio Receiver with block diagram. 07
- Q.5 (a) What is “Air traffic Management”? How does “Air Traffic Control” manage the flying in its area? 07  
(b) How an aircraft is able to find its direction with the help of NDB and VOR? What are errors in direction finding? 07
- OR**
- Q.5 (a) What is RADAR? How is it classified? How do we find range, azimuth, elevation and height of an object? 07  
(b) What are MLS and DME? How do they help in the landing of an aircraft? What are advantages of MLS over ILS? 07

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