

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 711906N**Date: 16-01-2013****Subject Name: Airport Planning and Design (Elective)****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 the following terms (with sketches) with respect to Air Transportation/Aviation field: 07

- (i) ACN and PCN (ii) Airway (iii) Approach Surface

(b) Explain the Civil Aviation de-regulation policy of the Indian government. 07

Q.2 (a) Explain the following terms (with sketches) with respect to Air Transportation/Aviation field: 07

- (i) Exit Taxiway (ii) Gate (iii) ILS

(b) State the global scenario (including India) of the Airport ownership and management models. OR

(b) Compare the salient features of A380 and B747 Aircrafts. 07

Q.3 (a) Explain, in brief, the structure and organisation of Air Transportation with specific roles of National and International organisations. 07

(b) Enlist the salient features of New Bangalore and New Hyderabad Airports. 07

OR

Q.3 (a) Explain the significance of visual aids and Aircraft controls for safe landing and Take-off. 07

(b) What are the functions of Tri-cycle under carriage? Sketch Dual-in-tandem wheel configuration. Explain the weight distribution on main gears and nose gears. 07

Q.4 (a) What is the significance of minimum circling radius for Aircraft under VFR and IFR operations ? 07

(b) Explain the significance of Aircraft weight and size in Airport design .Also show trends in weight and size in last 50 years. 07

OR

Q.4 (a) Define Airport Master Plan. Enlist the elements of Airport Master Plan. 07

(b) Explain the factors influencing the location of new Airport (site-selection process). 07

Q.5 (a) Explain land-use planning within and adjacent to Airport.	07
(b) Explain, with sketches (plan and L-section), the criteria for determining basic Runway length for large size turbined powered Aircraft.	07
OR	
Q.5 (a) Explain (with planview) various components of Runway system, specify the widths of Runway as recommended by ICAO for different Airports.	07
(b) Enlist and explain various steps in FAA method of Airport Pavement Design.	07