

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject code: 1721902****Subject Name: Transportation Planning****Date: 24/06/2011****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)** Answer the following : **07**
 i) Explain Land-use Transportation cycle with flow chart.
 ii) Explain 3-Levels of Transportation Planning : Strategic Planning, Tactical Planning and Project Planning
(b) What is trip? Explain significant factors in trip generation. Enlist and explain assumptions made in multiple linear regression analysis. **07**
- Q.2 (a)** Explain different structures (single-hub, multi-hub, point-to-point) of Air Transport Services supply. **07**
(b) What is category analysis? What are the assumptions made in category analysis? **07**
OR
(b) Explain the data-base for Airport System Planning. **07**
- Q.3 (a)** Explain the basic difference between Long-term (strategic) planning versus Short or Medium term Transportation System Management (TSM). **07**
(b) Explain the following tests and their significance on regression equations: **07**
 (i) R^2 -test; (ii) F-test; (iii) T-test.
OR
- Q.3 (a)** Explain, with a flow chart, role of individual Airports in Airport System Planning. **07**
(b) Enlist methods of trip distribution. Explain in detail Fratar method for trip distribution. **07**
- Q.4 (a)** Explain Land-use Transportation Model with a flow chart showing calibration phase (base year) and projection phase (design year). **07**
(b) Explain Gravity Model for Trip distribution. **07**
OR
- Q.4 (a)** Explain, with a flow chart, the system's structure of long term (strategic) transportation planning. **07**
(b) Explain compressibility and separability properties of Gravity Model. **07**
- Q.5 (a)** Justify the statement with a flow chart: Transportation System can be viewed as a composition of three sub systems, namely physical, Human and Activity. **07**
(b) Explain two stage modal-split model with flow diagram. Write note on Intervening opportunity model. **07**
OR
- Q.5 (a)** Explain Transportation System Management (TSM) planning process with a flow chart. **07**
(b) Explain capacity Restraint method for Traffic Assignment Model. **07**
