

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code: 711304N

Subject Name: Basics of Transportation Engineering

Date: 04 /02 /2011

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) Discuss merits and demerits of mass rapid transit system in urban area. **07**
(b) Discuss factors affecting trip production and trip attraction. **07**

- Q.2** (a) Distribute the trips using Furness method for the following data upto 1 iteration. **07**

O/D	1	2	3	Future production
1	50	200	350	900
2	150	50	400	1200
3	250	100	50	900
Future	900	700	1400	
Attraction				

- (b) State objects and uses of classified volume count survey. **07**

OR

- (b) State objects and uses of speed-delay studies. **07**

- Q.3** (a) Explain Speed-Flow-Density relationship. **07**

- (b) Develop regression model for trip generation from the following data: **07**

Household income (Rs. In thousands)	Trips per day
10	2
20	5
30	8
40	11
50	15

OR

- Q.3** (a) State merits and demerits of grade-separated intersections. **07**

- (b) Design superelevation for design speed of 100 kmph on a curve of radius 300 m. **07**
Workout speed limit if required.

- Q.4** (a) Explain ESWL. **07**

- (b) Write short note on PCU. **07**

OR

- Q.4** (a) Write short note on signs used on highways. **07**

- (b) State factors to be considered for location and planning of an airport. **07**

- Q.5** (a) Discuss the requirements of a railway station. **07**

- (b) Write short note on expansion joint in C.C. road. **07**

OR

- Q.5** (a) Differentiate between flexible and rigid pavement. **07**

- (b) Discuss the measures to prevent accidents. **07**
