



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, December 2016
(2008 Scheme)**

08.807.5 Elective V – TRANSPORTATION PLANNING (C)

Time : 3 Hours

Max. Marks : 100

Instruction : Answer *all* questions from Part – A and *any one* question from *each* module from Part – B.

PART – A

(Answer **all** the questions).

- I. a) What are the five stages in the transportation planning process ?
- b) What is meant by screen line ? Explain the importance of screen line counts.
- c) Distinguish between goals and objectives.
- d) What are the phases involved in the calibration of gravity model ?
- e) For a given set of regression models what criteria will you adopt in the selection of best model in transport modelling ?
- f) What are the assumptions made category analysis ?
- g) What is meant by traffic assignment ? Explain all or nothing assignment technique.
- h) Write short note on intelligent transportation system. **(8×5=40 Marks)**

PART – B

Module – I

- II. a) Explain the system approach to transportation planning process. Explain the difference between cyclic approach and system approach to transportation planning process.

10



- b) Briefly outline the various types of data necessary for analysing the existing condition survey of transportation system in transportation planning process. 10

OR

- c) Explain the home interview method of O-D survey. What are its advantages compared to other O-D surveys? 10
- d) Discuss how will you evaluate the accuracy of the survey data and expand the sample data so as to represent the whole population. 10

Module – II

- III. a) With the help of flow charts explain Simultaneous, Sequential and Recursive approaches of travel demand forecasting. 10
- b) Discuss the development of multiple linear regression models for homebased and non based trip generations. 10

OR

- c) Discuss the various methods of trip distribution analysis. 10
- d) Find the trip interchange in the horizon year using Fratar technique.

Origin	Destination				Growth factor
	A	B	C	D	
A	0	25	50	25	3
B	25	0	150	75	2
C	50	150	0	200	2
D	25	75	200	0	1
Growth factor	3	2	2	1	

10



Module – III

- IV. a) What is visual intrusion ? How can its ill effects be reduced ? **10**
- b) The calibrated utility function for travel in a medium sized city by different modes are given by

$$U = A_k - 0.05T_a - 0.04T_w - 0.02T_r - 0.01 C$$

Where A_k – mode specific constant,

T_a – Access time

T_w – Waiting time

T_r – Riding time

C – Out of pocket cost

Apply logit model to calculate the mode shares of car and bus

	A_k	T_a	T_w	T_r	C
Car	-0.005	5	0	30	100
bus	-0.05	10	10	45	50

10

OR

- c) Compare trip interchange and trip end mode split models using flow charts. **10**
- d) Explain capacity restraint assignment technique. **10**

