

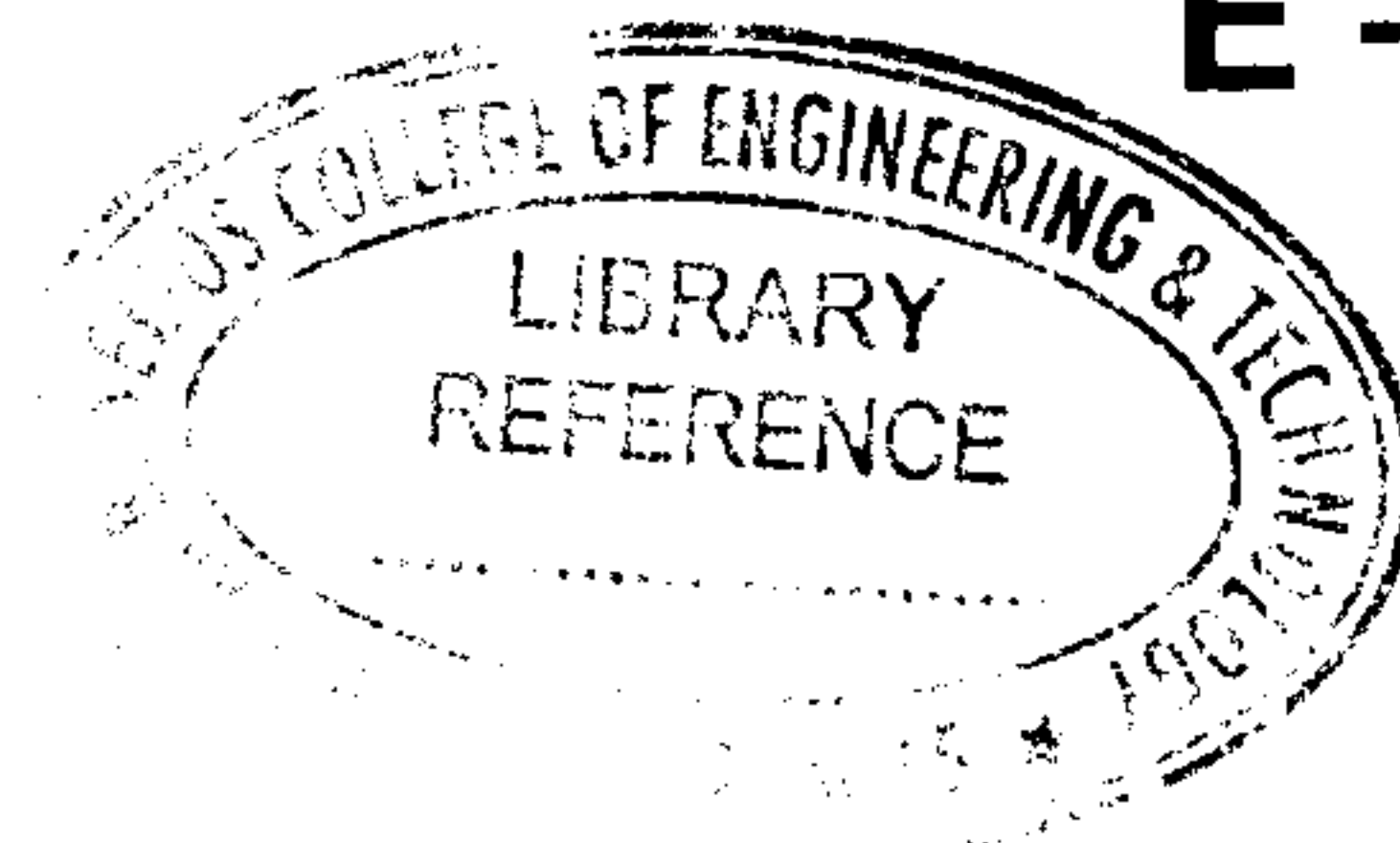


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E – 5268

Reg. No. : .....

Name : .....



**Seventh Semester B.Tech. Degree Examination, October 2018  
(2013 Scheme)**

**13.705.7 : TRANSPORTATION PLANNING (C) (Elective – II)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions :

1. What are the points to be considered while delineating the study area for transportation planning process ?
2. Discuss the criteria to be followed for the evaluation of regression model.
3. Discuss the underlying principles of the intervening opportunity model for trip distribution.
4. Describe the importance of modal split analysis in the transportation planning process.
5. Discuss the need for understanding the landuse in transportation planning.  
**(5×4=20 Marks)**

**PART – B**

Answer **any one full** question from **each** Module. **Each** question carries **20** marks.

**Module – I**

6. a) Explain with examples the application of system approach to urban transportation planning process. **15**
- b) What are the various sources of data for transportation planning ?  
Discuss in brief on the uses secondary data. **5**

OR

P.T.O.



7. a) Describe the various data collection techniques adopted for transportation planning data collection and its significance. 12
- b) What is meant by expansion of data ? Why it is necessary in transportation planning data collection ? 8

### Module – II

8. a) The following table gives the results of 10 geographical areas in a certain region surveyed. X is the residential population in thousands; Y is the number of transit trips in thousands.

Zone	1	2	3	4	5	6	7	8	9	10
X	40	60	80	20	40	60	80	40	20	60
Y	6.0	7.5	9.6	4.0	5.4	6.8	8.7	6.4	4.8	8.0

Develop a regression model for transit trips Y as a function of the population X. 12

- b) Explain in detail the various steps involved in calibration of gravity model for trip distribution analysis. 8

OR

9. a) The number of trips produced and attracted by four zones in the study area are given below : 12

Zones	1	2	3	4	Total
<b>Trips Produced</b>	35	62	56	47	200
<b>Trips attracted</b>	49	54	36	61	200

The order of closeness of the zones is given as

Zone	1	2	3	4
1	1	2	4	3
2	4	1	2	3
3	3	2	1	4
4	3	4	2	1

The Zonal 'L' factors for the zones given as

Zone	1	2	3	4
<b>'L' Factor</b>	0.03	0.05	0.06	0.04

Apply the intervening opportunity model to distribute the trips between the zones.



- b) Explain the growth factor models available for trip distribution. List out its advantages and disadvantages. 8

**Module – III**

- 10. a) Describe the concept of utility theory applications in mode choice models. 10
- b) Discuss the applications of Logit models for modal split analysis. 10

OR

- 11. a) Discuss the concept of all or nothing method of traffic assignment. What are the merits and demerits of this method over other methods ? 10
- b) Describe the diversion cures approach of trip assignment in transportation planning process. 10

**Module – IV**

- 12. Explain with the flow diagram the structure of Lowry Garin Landuse-transport model and its features. 20

OR

- 13. What are the important softwares are used in Transportation planning process ? Bring out the salient features and applications of any two softwares. 20

