



# CBCS SCHEME

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15CV751

## Seventh Semester B.E. Degree Examination, June/July 2024 Urban Transportation and Planning

Time: 3 hrs.

Max. Marks : 80

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain the system approach to transport planning using a flow chart. (10 Marks)
- b. Explain the various urban transport problems. (06 Marks)

OR

- 2 a. Explain the features of BRTS. (07 Marks)
- b. Explain briefly the travel demand. (05 Marks)
- c. Write the types of transit system and explain any two. (04 Marks)

### Module-2

- 3 a. Define external cordon line. What factors should be given due weightage in the selection of external cordon line. (06 Marks)
- b. What is zoning? Discuss the points to be kept in mind while doing zoning. (10 Marks)

OR

- 4 a. What are the methods of origin and destination study? Explain home interview method in detail. (08 Marks)
- b. What is sampling? Discuss various types of samplings. (08 Marks)

### Module-3

- 5 a. Explain in detail the various factors governing trip generation. (08 Marks)
- b. What is multiple linear regression analysis and mention the assumptions made. (08 Marks)

OR

- 6 a. What is trip distribution and mention the methods of trip distribution. (04 Marks)
- b. Explain category analysis and mention the assumptions made. (04 Marks)
- c. Let the trip rate of zone is explained by the house hold size done from field survey. If was found that the household sizes are 1, 2, 3, 4, the trip rates of the corresponding house hold is shown in the table below :

Household Size	1	2	3	4
	2	3	4	5
trips /day	3	5	7	8
	3	4	4	5
ΣY	8	12	15	18

(08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

**Module-4**

- 7 a. Write a short note on opportunity models. (06 Marks)  
 b. The total trips produced in and attracted to the three zones A, B and C of a survey area in the design year area tabulated as :

Zone	Trips produced	Trips attracted
A	2000	3500
B	3500	4800
C	4800	2000

It is known that the trips between two zones are inversely proportional to the second power of the travel time between zones, which is 25 minutes. If the trip interchange between zones B and C is 300. Calculate the trip interchange between zones A and B, A and C, B and A, C and B. (10 Marks)

OR

- 8 a. Define modal split and explain in brief the factors affecting modal split. (10 Marks)  
 b. Draw the flow diagram for modal split carried out between trip generation and trip Distribution. (06 Marks)

**Module-5**

- 9 a. What are the applications of traffic assignment? (08 Marks)  
 b. Write a note on :  
 i) All or nothing assignment  
 ii) Capacity Restraint assignment. (08 Marks)

OR

- 10 Explain land use planning models. (10 Marks)  
 Write a note on user equilibrium assignment. (06 Marks)

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