



CBCS SCHEME

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18CV745

Seventh Semester B.E. Degree Examination, July/August 2022

Urban Transport Planning

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain the problems in the urban transportation in the present scenario. (10 Marks)
- b. Explain the features of BRTS. (06 Marks)
- c. Explain travel demand. (04 Marks)

OR

- 2 a. Explain with a flow chart on urban transportation system planning process. (10 Marks)
- b. Explain the types of transit systems. (10 Marks)

Module-2

- 3 a. What is sampling and explain the various types of samplings. (08 Marks)
- b. Explain the home interview surveys. (07 Marks)
- c. Explain the use of secondary sources. (05 Marks)

OR

- 4 a. Explain the factors considered for the selection of external cordon line for an urban transportation. (10 Marks)
- b. Write short notes on;
 - i) Commercial vehicle surveys.
 - ii) Taxi Surveys and Tag Survey. (10 Marks)

Module-3

- 5 a. Explain in detail the various factors governing trip generation. (10 Marks)
- b. What is multiple regression analysis and assumptions? (10 Marks)

OR

- 6 a. Define the following;
 - i) Trip Generation. (06 Marks)
 - ii) Home based and non home based trip. (05 Marks)
 - iii) Trip attraction.
- b. Mention the assumptions made in category analysis.
- c. Fit a linear equation relating trip rate and household size for the field survey data obtained given below. It was found that the house hold sizes are 1, 2, 3 and 4 and the trip ratio corresponding to household given in the table.

	Household size (x)			
	1	2	3	4
	1	2	4	6
Trips per day (y)	2	4	5	7
	2	3	3	4
Σy	5	9	12	17

(09 Marks)

Module-4

- 7 a. Explain in detail types of trip distribution methods. (10 Marks)
 b. Solve the future trips for the given data below by average growth factor method.

D/O	A	B	C
A	30	50	100
B	50	10	150
C	100	150	10

The future trips generated in zones A, B and C are expected to be 180, 630 and 1560 respectively. (10 Marks)

OR

- 8 a. The total trips produced in and attracted to the three zones A, B and C of a survey area in the design year are tabulated as.

Zone	Trips produced	Trips attracted
A	1000	1500
B	1500	2000
C	2000	1000

It is known that the trips between two zones are inversely proportional to the second power of the travel time between zones, which is uniformly 10 minutes. If the trips interchange between B and C is known to be 300, calculate the trip interchange between zones A & B, A & C, B & A and C & B. (08 Marks)

- b. Explain in detail the Fratar method of finding trip distribution and mention the disadvantages. (06 Marks)
 c. What are opportunity model? Explain the types of opportunity model. (06 Marks)

Module-5

- 9 a. Describe the structure of a Lowry model, using a flow chart. (10 Marks)
 b. Explain the different types of Assignment Techniques for traffic assignment. (10 Marks)

OR

- 10 Write short notes on the following:

- Difficulties in Transports planning
- Diversion Curves
- Quick response transport planning technique
- Capacity restraint techniques.

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(20 Marks)
