

CBCS SCHEME



17CV751

Seventh Semester B.E. Degree Examination, July/August 2022 Urban Transportation and Planning

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. What is Urbanization? Explain the causes of urbanization. (08 Marks)
b. List the merits and demerits of urbanization. (06 Marks)
c. Explain the scope of urban transport planning. (06 Marks)

OR

- 2 a. Write the flow diagram of stages in transport planning process. (08 Marks)
b. Explain the classification of transit systems. (08 Marks)
c. Write a note on BRTS and metro rails. (04 Marks)

Module-2

- 3 a. Define study area. Explain the criteria for selecting external cordon line for an urban transportation study. (10 Marks)
b. Define "zone". Mention the different factors considered in dividing the whole area of zones. (10 Marks)

OR

- 4 a. What are the different types of surveys carried out during transport planning process? Explain briefly. (10 Marks)
b. What is sampling? Discuss various types of samplings. (10 Marks)

Module-3

- 5 a. Explain the factor governing trip generation and attraction rates. (10 Marks)
b. The following data shows house hold size and total trips made per day for a particular zone of study area. Develop the trip production equation and also compute coefficient of correlation.

House hold size	2	3	4	5	6
Trips per day	4	5	7	10	10

(10 Marks)

OR

- 6 a. Explain category analysis and list the merits and demerits of category analysis. (08 Marks)
b. Obtain the future trip table by:
i) Uniform growth factor method
ii) Average growth factor method.

D \ O	1	2	3	Future trips
1	60	100	200	360
2	100	20	300	1260
3	200	300	20	3120

(12 Marks)

Module-4

- 7 a. Write a note on:
 i) Gravity model
 ii) Tanner model. (08 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 are tabulated as follows:

Zone	Trips produced	Trips Attracted
A	2000	3000
B	3000	4000
C	4000	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 uniformly 20 minutes. If the trip interchange between zones B and C known to be 600, calculate the trip interchange between zones A & B, A & C, B & A, C & B. (12 Marks)

OR

- 8 a. Define model split. What are the factors affecting model split? (08 Marks)
- b. Draw the flow diagram for model split carried out between trip generation and trip distribution and explain. (12 Marks)

Module-5

- 9 a. Define traffic assignment and explain the various application of traffic assignment. (10 Marks)
- b. List the various assignment techniques and explain any two methods. (10 Marks)

OR

- 10 a. Explain land use planning models. (10 Marks)
- b. Write a brief note on Lowry Land, use transport model for urban structure analysis. (10 Marks)

CMRIT LIBRARY
 BANGALORE - 560 037