



# CBCS SCHEME

18CV745

## Seventh Semester B.E. Degree Examination, June/July 2023 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. Define Urbanization and explain the causes of Urbanization. (10 Marks)
- b. Explain the classification of transit systems with examples. (10 Marks)

OR

- 2 a. Explain the "System approach" to urban transport planning using a flow chart. (10 Marks)
- b. What is mass transit system? Compare BRTS and Metro rails. (10 Marks)

### Module-2

- 3 a. Explain zoning. What are the important points to be kept in mind while dividing the area into zones? (10 Marks)
- b. Define study area and explain external cordon line. (10 Marks)

OR

- 4 a. Explain (i) Home Interview Surveys (ii) Commercial Vehicle Surveys. (10 Marks)
- b. What are secondary sources of data in transport planning? Explain any two. (10 Marks)

### Module-3

- 5 a. What is multilinear regression analysis and list the assumptions made. (10 Marks)
- b. List and explain factors Governing trip generation and attraction rates. (10 Marks)

OR

- 6 a. Define "Category Analysis". What are the assumptions to be made in category analysis? (10 Marks)
- b. The distribution of present trips among the zones 1, 2, 3 are given in the OD matrix below. The future trips generated in zones 1, 2 and 3 are expected to be 360, 1260 and 3120 respectively. It is required to distribute the future trips among the zones.

D \ O	1	2	3
1	60	100	200
2	100	20	300
3	200	300	20

Using Uniform Growth Factor method and list disadvantages of this method. (10 Marks)

**Module-4**

- 7 a. What is trip distribution and mention the methods of trip distribution. (10 Marks)  
 b. The total trips produced in and attracted to the three zones A, B and C of a survey are in the design year are tabulated as below:

Zone	Trips produced	Trip 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 is known to be 600. Calculate the trip interchange between zones A and B, A and C, B and A, C and B. (10 Marks)

**OR**

- 8 a. With a neat flowchart explain model split carried out between trip generation and trip distribution. (10 Marks)  
 b. Write a short note on (i) Desire line diagram (ii) Gravity model. (10 Marks)

**Module-5**

- 9 a. Define trip assignment and explain the various applications of trip assignment. (10 Marks)  
 b. Mention the different assignment techniques. Explain any one. (10 Marks)

**OR**

- 10 a. Explain in detail the features of the Lowry Model. (10 Marks)  
 b. Write a brief note on Diversion Curves. (10 Marks)

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