CBCS SCHEME

15CV751

Seventh Semester B.E. Degree Examination, Jan./Feb. 2023
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. Define Urbanization and explain causes of Urbanization. **(08 Marks)**
    b. What are the Transportation problems and identify? Explain briefly. **(08 Marks)**

OR

2   a. Define Mass Transportation. What are the advantages and disadvantages of Mass Rapid Transit System? **(10 Marks)**
    b. Differentiate between the Bus Rapid Transit System and Metro Rail System. **(06 Marks)**

Module-2

3   a. Define 'Zone'. Mention the different factors considered in dividing the whole area into zones. **(08 Marks)**
    b. List the different sampling techniques. Explain any two briefly. **(08 Marks)**

OR

4   a. Mention the different types of transport surveys. Explain any one type briefly. **(08 Marks)**
    b. Define Expansion Factor. Explain briefly the accuracy check necessary for the data collection by any survey. **(08 Marks)**

Module-3

5   a. Explain the factors governing trip generation and attraction rates. **(08 Marks)**
    b. What is Category Analysis? Mention the assumptions made in Category Analysis. **(08 Marks)**

OR

6   a. What is Trip Distribution? Explain Growth Factor method in Trip Distribution. **(05 Marks)**
    b. A study area has been divided into four zones A, B, C and D. The results of trip generation analysis and the present trip distribution matrix is included in the following table:

		A	B	C	D
Produced trips	Present	150	90	180	80
	Future	300	170	270	240
Anticipated trips	Present	120	100	150	130
	Future	180	300	300	200

Develop the future distribution of trip matrix using:
(i) Uniform factor method   (ii) Average factor method
Present trip distribution matrix is as shown below:

O \ D	A	B	C	D
A	40	40	40	30
B	20	20	30	20
C	40	30	50	60
D	20	10	30	20

(11 Marks)

Module-4

7 a. Explain the Gravity Model Method briefly. **(08 Marks)**
  b. Define Modal Split. Explain in brief the factors affecting Model Split. **(08 Marks)**

OR

8 a. Explain briefly the Opportunity Model and its types. **(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 are tabulated as :

Zone	Trip 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 min. 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)**

Module-5

9 a. Explain briefly the Diversion Curves. **(08 Marks)**
  b. Explain briefly the All – or – Nothing Assignment. **(08 Marks)**

OR

10 a. Discuss "Selection of Land use Transport Model". **(08 Marks)**
   b. Write a flowchart of Fundamental Structure of Lowry Model and explain the Principal Components of the Model. **(08 Marks)**

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