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10CV843

Eighth Semester B.E. Degree Examination, June/July 2019
Urban Transport Planning

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting atleast TWO questions from each part.***

PART - A

1 a. Explain the scope of Urban transport planning. **(10 Marks)**

b. Define system approach and explain with a neat flow diagram system approach in urban transport planning. **(10 Marks)**

2 a. Draw a flow chart of stages in urban transport planning process. **(12 Marks)**

b. Write short notes on : i) Trip distribution ii) Modal split. **(08 Marks)**

3 a. Define Zoning. Explain the points to keep in view when dividing the area into zones. **(12 Marks)**

b. Explain how road side interview survey and registration number plate survey are carried out. **(08 Marks)**

4 a. Define Home – based trips and Non – Home based trips. Explain the factors governing trip generation and attraction rates. **(10 Marks)**

b. Solve the below matrix by Frator's method. **(10 Marks)**

O \ D	A	B	C	D
A	-	10	12	18
B	10	-	14	14
C	12	14	-	6
D	18	14	6	-
Present total	40	38	32	38
Estimated future Totals	80	114	48	38
Growth factor E	2	3	1.5	1

PART - B

5 a. Explain the phases involved in calibration of the gravity model. **(10 Marks)**

b. The number of trips produced in an attracted to the three zones 1, 2 and 3 are tabulated below

Zone	1	2	3	Total
Trips produced	14	33	28	75
Trips attracted	33	28	14	75

The order of closeness of the zones is including by the following matrix.

O \ D	1	2	3
1	1	2	3
1	2	1	3
3	2	3	4

The zonal L factors are given below :

Zone	L - factors
1	0.04
2	0.02
3	0.04

Distribute the trips between the zones. **(10 Marks)**

6 a. With a flow chart, explain the modal split carried out after trip distribution with its advantages and disadvantages. (10 Marks)
b. Explain the recent developments in modal split analysis. (10 Marks)

7 a. Explain minimum path tree with Moore's algorithm. (10 Marks)
b. With a flow chart, explain features of Lowry model. (10 Marks)

8 Write a short notes on the following :
a. Quick response techniques. (05 Marks)
b. Diversion curves. (05 Marks)
c. Difficulties in transport planning. (05 Marks)
d. Applications of traffic assignment. (05 Marks)

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