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10CV843

Eighth Semester B.E. Degree Exatiiination, Dec.2018/Jan.2019
Urban Transport Planning

Time 3 his 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. (05 Marks)
b. Discuss the interdependence of the land use and traffic. (07 Marks)
c. With a help of flow chart, explain system approach to Urban planning. (08 Marks)

2 a. Explain the various stages involved in transport planning. (10 Marks)
b. The following information was obtained from a transportation survey of a town, develop a linear regression model for estimating the trips from each zone. If the population in a particular zone increases to 60,000 predict the expected trip generation from that zone. (10 Marks)

Zone	1	2	3	4	5			8
X	52	56	62	66	44	60	40	50
Y	24	22	34	30	24	30	18	26

3 a. Define a 'Zone'. Mention the different factors considered in dividing the whole area into zones. (10 Marks)
b. With a neat sketch, explain the road side interview survey method. (10 Marks)

4 a. Explain the factors governing the trip generation and attraction. (10 Marks)
b. Explain the category analysis with the assumptions_ Mention the advantages and disadvantages of this method. (10 Marks)

PART —13

5 a. Obtain the future trip table by using : i) Uniform Rate method ii) Average growth factor method. (10 Marks)

O-----1)_	1	2	3
1	50	40	60
2	40	20	30
3	60	30	20

The future trips generated in zone 1, 2, 3 are expected to be 300, 180, 320.
b. The number of trips produced in and attracted to the three zones 1, 2, and 3 are tabulated as follows :

Zone	1	2	3
Trips produced (Pi)	14	33	28
Trips Attracted (Aj)	33	28	14

As a result of calibration the friction factors to be associated with the impedance values between the various zones have been found to be as follows :

Impedance values	2	4	5	8
Friction factors	82	52	50 41 39 26 1 20	13

The impedance values between the various zones can be taken from the following matrix.

	I	2	3
1	8	1	
2	3		5
3		7	4

Distribute the trips between the various zones. (At least two iterations) **(10 Marks)**

6 a. Explain the factors affecting the Model split. **(10 Marks)**

b. With a help of flow diagram, explain the modal split carried out between trip generation and trip distribution. **(10 Marks)**

7 a. Briefly explain the important considerations in selecting a land use transport models. **(10 Marks)**

b. With a flow chart, explain the structure of Lowry model. **(10 Marks)**

8 Write short notes on the following :

a. Moore's algorithm. **(05 Marks)**

b. Diversion curve. **(05 Marks)**

c. Recent developments in model split analysis. **(05 Marks)**

d. Difficulties in transport planning for small and medium cities. **(05 Marks)**