U.S.N ☐☐☐☐☐☐☐☐☐☐

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Eighth Semester, B.E. - Civil Engineering
Semester End Examination; May / June - 2019
Urban Transport Planning

Time: 3 hrs   Max. Marks: 100

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1 a.	What is urban transportation system? Discuss goals and objective of the transportation planning.	10
b.	Define "system approach". Explain the system approach to transport planning with a flow diagram.	10
2 a.	Explain the interdependence of land use and traffic.	10
b.	Discuss the various surveys and analysis of existing condition in the transport planning process with the help of flow chart.	10

UNIT - II

3 a.	Explain the surveys that are usually carried out during urban transport planning.	10
b.	Explain zoning and study area, and the factor affecting the selecting of zones.	10
4 a.	What are the factor governing trip generation and attraction rates? Explain.	10
b.	Explain multiple linear regressions analysis used in trip generation. Give examples.	10

UNIT - III

5 a. Explain any two growth factor methods and any one synthetic method. 10

b. The distribution of present trips among zones 1, 2, 3, 4 are given in the OD matrix. The future trips generated in zones 1, 2, 3, 4 are expected to be 300, 1000, 800, 300 respectively. It is requried to distribute the future trips among the zones by average factor method.
Carry out two iterations. 10

O\D	I	II	III	IV
I	0	25	50	25
II	25	0	150	75
III	50	150	0	200
IV	25	75	200	0

6 a. Explain Gravity model. Also the various equations used to calculate the inter zonal trips using Gravity model. 10

b. The base year trip matrix for a study area consisting of three zones is given below. The production from zone 1, 2 and 3 for the horizon year is expected to grow 98, 106, and 122 respectively. The attractions from these zones are expected to increase to 106, 118, 106 respectively. Compute the trip matrix for the horizon year using Furness method. 10

	1	2	3
1	20	30	28
2	36	32	24
3	22	34	26

UNIT - IV

7 a.	What are the factors affecting modal split?	10
b.	Draw the flow diagram for modal split carried out between trip generation and trip distribution and explain.	10
8 a.	Discuss the importance of 'Moore's algorithm' for finding the shortest path in the highway network using an example.	10
b.	List the different assignment techniques and explain anyone assignment techniques in detail used in urban transport planning.	10

UNIT - V

9 a.	Discuss the different types of indian public transport vechicles and their characterstics.	10
b.	Describe the importance of computer application in the field of transport planing.	10
10 a.	Explain the difficulties in transport planning.	10
b.	Discuss about recent case studies on urban transport planning.	10

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