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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; July - 2021

Urban Transport Planning

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Define transportation planning. Explain the “interdependence of land use and traffic”. 10
- b. Describe various urban transportation problems and issues. 10
- 2 a. With a flowchart, discuss the urban transport system planning process. 10
- b. With a neat figure, explain the basic components of transportation system with their relationship. 10
- 3 a. Enumerate and explain the types of inventories of transportation facilities. 10
- b. Enumerate the factors influencing the trip generation and explain the zonal regression technique for trip generation analysis. 10
- 4 a. With assumptions, explain the concept of category analysis. 10
- b. Describe the concept of study area, zoning and explain the factors affecting zoning. 10
- 5 a. Explain the synthetic model based on Newton’s concept of gravity. 10
- b. Discuss the advantages and disadvantages of growth factor models. 10
- 6 a. Enumerate and explain the different methods of growth factor models. 10
- b. The distribution of present trips among zone 1 to 3 are given in the O.D matrix below,

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

10

The future trips generated in zone 1, 2, 3 are expected to be 360, 1260, and 3120 respectively. Distribute the future trips.

- 7 a. Define modal split and explain the factors affecting modal split. 10
- b. Explain the recent developments in modal split analysis. 10
- 8 a. Enumerate the methods of route assignment. Explain any two methods. 10
- b. Explain traffic assignment. Explain the application of traffic assignment. 10
- 9 a. Explain the difficulties in transport planning for small and medium cities. 10
- b. Discuss the various computer applications in transportation planning. 10
- 10 a. Write a short note on; 10
 - i) Metro Rail
 - ii) Intermediate Public Transport in Indian cities
- b. What are the factors that govern the planning process for small and medium cities? 10