

Code No: R204101D

R20

SET - 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Advanced Supplementary Examinations March 2025

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) How do socioeconomic factors influence travel characteristics? [7M]
b) Compare sequential and simultaneous approaches in transport modeling. [7M]
(OR)
2. a) What are the major phases in the transportation planning process? [7M]
b) Discuss the applications of aggregate models in urban transport planning. [7M]

UNIT-II

3. a) Describe the steps involved in organizing a transportation survey? [7M]
b) What are the common errors in transportation surveys, and how can they be minimized? [7M]
(OR)
4. a) Discuss the factors influencing the delineation of transportation zones. [7M]
b) Explain the relationship between population growth and transportation planning. [7M]

UNIT-III

5. a) What is the Urban Transportation Planning System (UTPS) approach? Explain its significance in transport planning. [7M]
b) What are the advantages of using household models over zonal models? [7M]
(OR)
6. a) Discuss the role of computer-based models in the UTPS approach. [7M]
b) Illustrate the differences between gravity models and opportunity models? [7M]

UNIT-IV

7. a) Discuss the relationship between mode split curves and travel attributes such as cost and time. [7M]
b) Explain the relationship between diversion curves and travel demand forecasting. [7M]
(OR)
8. a) How do disaggregate approaches improve the accuracy of mode choice predictions? [7M]
b) Discuss the different criteria used for path selection in transport networks. [7M]

UNIT-V

9. a) Discuss the key components of a transportation master plan. [7M]
b) Explain the advantages of using pivot point analysis in travel demand forecasting. [7M]
(OR)
10. a) Explain the role of economic, social, and environmental factors in corridor selection. [7M]
b) Discuss a case study of a successful urban transportation master plan. [7M]
