

R18

Code No: 158CX

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year II Semester Examinations, July - 2023

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

- 1.a) What is the aim of urban transport planning? [2]
- b) What are the four stages of urban transportation planning? [3]
- c) What are types of trip generation? [2]
- d) What is the trip generation stage? [3]
- e) What are the types of trip observed in urban transportation? [2]
- f) What are the two types of trip distribution? [3]
- g) What is modal split in urban transportation planning? [2]
- h) Which factors can determine the modal split in transportation? [3]
- i) What is the objective of trip assignment? [2]
- j) What is user equilibrium assignment? [3]

PART – B

(50 Marks)

- 2.a) Describe various urban transportation problems and issues. Explain any three challenges and limitations of Transportation System.
 - b) Distinguish between cordan lines and screen lines. [5+5]
- OR**
- 3.a) Explain various survey sampling techniques used in data collection process. How do you refine the data and various checks for the data?
 - b) What do you understand by overall planning process? Explain long term planning process and short term planning process with examples. [5+5]
- 4.a) Describe the concept of zoning system, study area, trips generation and the concept OD data collection process with suitable formats.
 - b) Explain various survey sampling techniques used in data collection process. How do you refine the data and various checks for the data? [5+5]
- OR**
- 5.a) What are the factors influencing the trip generation? Describe the zonal regression technique for trip generation analysis?
 - b) Explain the personal trip generation models. [5+5]

QA QA QA QA QA QA QA G

6. Describe the procedure for calibration of Gravity model and also mention the significance of deterrence function in gravity model. [10]

OR

7.a) Distinguish between opportunity model and gravity opportunity model. [5+5]
b) Specify the advantages and disadvantages of growth factor method.

8.a) Explain the concept of logit models for mode choice analysis.
b) Explain trip end model split model and two stage model spilt models with suitable formulas and examples? [5+5]

OR

9.a) Discuss the zonal regression models in choice analysis
b) Compare between binary mode choice model and multinomial mode choice model with suitable formulas? [5+5]

10. Explain in detail the characteristics and capacities of different mass transit systems in urban transportation. [10]

OR

11. What is trip assignment? List out various trip assignment techniques. [10]

---ooOoo---

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G