

Enrolment No./Seat No _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code:3160608

Date:04-06-2025

Subject Name:Urban Transportation Planning

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Enlist and explain the objectives of Transportation planning.	03
	(b) What are the role of transportation in society? Discuss economic and social role of transportation.	04
	(c) Explain different levels of of urban transportation planning stage with sketch.	07
Q.2	(a) Advantage and Disadvantage of mass transit system.	03
	(b) Explain mass transit system and mass rapid transit system. Also explain capacity of rapid transit system.	04
	(c) What are the factor responsible for travel demand? Explain them in detail.	07
	OR	
	(c) Briefly explain urban mass rapid transit system with their advantages and disadvantages.	07
Q.3	(a) Explain the terms: Screen line checks and Cordon line checks.	03
	(b) Define the following: (i.) Study area (ii.) Cordon Line (iii.) Screen Line (iv.) Trip Generation.	04
	(c) What are different surveys in transportation planning? Explain road side interview surveys in detail.	07
	OR	
Q.3	(a) Compare Trip end model and Trip interchange model.	03
	(b) Explain gravity model.	04
	(c) Enlist and explain objectives of Origin and Destination Survey. Describe any one method for conducting O-D survey.	07
Q.4	(a) Define the following: (i.) CBD (ii.) Interzonal Trip (iii.) Intrazonal Trip	03
	(b) What is TRC trip assignment model.	04
	(c) What is trip generation? Explain in detail the factor governing trip generation and attraction rate.	07
	OR	
Q.4	(a) What is a mega city? Explain in brief	03
	(b) Define: 1) Urban form 2) Urban structure.	04
	(c) What is corridor? Explain by drawing sketch typical corridor components.	07

- Q.5** (a) List out the basic road pattern in urban area with help of neat sketch. Explain anyone pattern. **03**
- (b) Give classification on urban road and explain in detail. **04**
- (c) The following data shows average household size and total trips made per day for a particular zone of study area. Develop the trip Production question and check its validity.

Average Household Size	Total Trips Made Per Day
2	4
3	6
4	7
5	8
6	10

07

OR

- Q.5** (a) Explain Monorail. Give its advantage and Disadvantage of it. **03**
- (b) What is land use? Explain in brief. **04**
- (c) Find the maximum capacity per hour of BRT and metro for the frequency of 60 trips per hour on any corridor. **07**
