

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3160608****Date:16/06/2022****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) Define – Urban area, Mobility, Accessibility	03
	(b) Classify urban class group	04
	(c) Explain problem in urban transportation in the present scenario of high vehicle ownership	07
Q.2	(a) Enlist various types of Para-transit system. Explain any one in brief.	03
	(b) Explain advantages and disadvantages of BRTS.	04
	(c) Compare different mass transit system	07
OR		
	(c) What are the requirements of good urban mass transportation system?	07
Q.3	(a) Define – Cordon line, Screen line, Inter zonal trips	03
	(b) Compare the revealed preference survey with stated preference survey.	04
	(c) Discuss about Logit models for mode choice.	07
OR		
Q.3	(a) Define – Through trip, Zone, CBD	03
	(b) Explain – Home interview survey	04
	(c) Describe various types of checks in transportation surveys.	07
Q.4	(a) What are the limitations of growth factor methods for trip distribution?	03
	(b) Explain factors affecting modal split	04

- (c) The design year total person trips distributed between four zones are shown in the table below. The modal split analysis shows 70/30 for public transport – vs – private car, as an overall split. The peak period car occupancy is 1.7 persons per car and 51 persons per bus. Develop the trip matrices for the two modes and total vehicular trips. **07**

O	D	A	B	C	D
A	--	1500	700	2500	
B	580	--	800	550	
C	1200	1400	--	1900	
D	2300	450	450	--	

OR

- Q.4** (a) What are the factors affecting trip generation and attraction rates? **03**
- (b) Write a short note on – Gravity model **04**
- (c) Develop trip generation equation using regression analysis for the following data **07**

No. of workers in household	Trips per day
2	4
4	12
3	8
4	10
3	9
5	13
3	8
2	3
3	7
5	12

- Q.5** (a) Explain urban forms and structures. **03**
- (b) What are the components of urban goods traffic? **04**
- (c) Describe briefly corridor identification. **07**

OR

- Q.5** (a) What do you understand by transit scheduling? **03**
- (b) What are the factors affecting urban goods movement? **04**
- (c) How will you identify potential corridor in urban road transit system? **07**
