GUIARAT TECHNOLOGICAL UNIVERSITY

		BE - SEMESTER-VII EXAMINATION - SUMMER 2016		
Su	bject	Code:170604 Date:05/05/201	Date:05/05/2016	
Su	bject	Name:Urban Transportation System (Department Elective-I)		
Ti	me:0	2:30 PM to 05:00 PM Total Marks: ⁴	70	
Ins	tructio 1. 2. 3.	ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Discuss levels of urban transportation planning. Explain with sketch. What is urban transportation system? Discuss goals and objectives of the transportation planning.	07 07	
Q.2	(a)	Define : (a) Desire line (b) Interzonal and Intrazonal trips (c) Study area (d) Cordon line (e) Expansion factor (f) Screen line (g) CBD	07	
	(b)	List out O and D survey methods. Explain any one in detail.	07	

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OR

- (b) Define zoning. What are the factors to be considered for zone selection? 07
- Q.3 (a) Develop the future distribution of matrix using (i) Uniform growth factor 07 method and (ii) Average growth factor method. Future trips for A, B, C and D zones are given 350, 400, 330 and 300 respectively.

D O	А	В	С	D
А	50	70	45	80
В	90	80	50	55
С	60	75	70	40
D	50	60	55	60

(b) Discuss screen line check and accuracy check in transportation planning. 07

OR

(a) The present flow of trips between four zones 1, 2, 3 and 4 of the study area is Q.3 07 shown in the trip matrix given below. Distribute the trips using Furness method.

D	1	2	3	4	Future outgoing
1	-	120	45	80	360
2	30	-	40	40	200
3	50	80	-	90	285
4	40	35	50	-	260
Future Incoming	200	345	330	230	

(b) Explain factors governing trip generation and trip attraction rate.

07

(a) Write short note on multiple linear regression analysis. Also discuss its Q.4 07 assumptions.

(b) The total trips produced in and attracted to the three different zones X, Y and Z 07 of a survey area in the design year are as follow:

Zones	Trips Produced	Trips attracted
Х	3400	2500
Y	4000	2200
Ζ	4000	3500

The trips between two zones are inversely proportional to the second power of the travel time between zones, which is uniformly 30 minutes. If the trip interchange between zones Y and Z is known to be 600, Calculate the trip interchange between zones X and Y, X and Z, Y and X, Z and Y.

Q.4	(a)	Write short note on (i) All or nothing assignment (ii) Category analysis	07
-	(b)	Define modal split. Describe methods of modal split with its advantages and disadvantages.	07
Q.5	(a)	Classify urban structures with neat sketch.	07
-	(b)	What is corridor identification? Discuss corridor screen line analysis.	07
		OR	
Q.5	(a)	Compare bus and rail transit system with characteristics and capacity.	07
	(b)	Discuss traffic system management plan and comprehensive plan.	07
