Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (OLD) EXAMINATION – WINTER 2018

Subject Code: 170604   **Date: 15/11/2018**

Subject Name: Urban Transportation System

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.**

Q.1	**(a)**	What is trip generation? Enlist methods of trip generation analysis and explain any one in detail.	**07**
	(b)	Discuss study area and zoning for transportation planning.	**07**
Q.2	**(a)**	Distribute 602 work trip productions from zone 3 to zones 1, 2, 3, 4 and 5.The no. of work trip productions and attractions were determined in the trip generation as below. Use gravity model and assume $K_{ij} = 1$.	**07**

Zone	Production	Attraction	Friction Factor
1	-	1080	6
2	-	531	29
3	602	76	45
4	-	47	18
5	-	82	4

	(b)	Explain levels of urban transportation planning.	**07**
		OR	
	(b)	Discuss factors affecting trip generation or travel demand.	**07**
Q.3	**(a)**	Enlist various growth factor methods for trip distribution. Explain furness method in detail.	**07**
	(b)	Explain aggregate and disaggregate approaches for developing models for estimation of trip production and trip attraction.	**07**
		OR	
Q.3	**(a)**	Suggest basic requirements for efficient Urban Public Transportation System.	**07**
	(b)	Discuss briefly innovations in the rapid transit system.	**07**
Q.4	**(a)**	Compare BRTS & METRO Systems.	**07**
	(b)	Discuss classification of urban goods movement.	**07**
		OR	
Q.4	**(a)**	Write a short note on various methods of route assignment.	**07**
	(b)	Discuss logit model in brief.	**07**
Q.5	**(a)**	Write a short note on paratransit system.	**07**
	(b)	Describe methodology for evaluating corridor operation.	**07**
		OR	
Q.5	**(a)**	Explain captive transit riders and choice transit riders.	**07**
	(b)	Distinguish between trip end model and trip interchange model.	**07**

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