Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2721316 **Date: 02/06/2016**

Subject Name: Basics of Transportation Engineering

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 are the economic and social functions of Transportation? Describe in details.	**07**
	(b)	What do you understand by Transportation planning? Explain by drawing flow diagram transportation planning process.	**07**
Q.2	**(a)**	Discuss the significance of Co-ordination in transportation. Also discuss the factors affecting co-ordination.	**07**
	(b)	Enlist the different surveys to be carried out before Transportation planning process.	**07**
		OR	
	(b)	Explain category analysis method of trip generation.	**07**
Q.3	**(a)**	Write a short note on "Gravity Model".	**07**
	(b)	What is desire line diagram? How is it prepared? What is its significance?	**07**
		OR	
Q.3	**(a)**	Which are the different elements to be designed in the highway geometry? Explain briefly their importance in the smooth operation of movement of vehicles	**07**
	(b)	What is the necessity of speed studies? describe the procedure of speed and Delay studies.	**07**
Q.4	**(a)**	What are the important features of flexible pavement design by CBR method as per IRC: 37-2001.	**07**
	(b)	Explain with neat sketch, various types of Parking facilities?	**07**
		OR	
Q.4	**(a)**	Compare Mass Transit system and Demand responsive Transit system?	**07**
	(b)	What is the significance of air transportation? describe the factors to be Considered for location of airport in city.	**07**
Q.5	**(a)**	What is role of railway transportation at national level? describe different Railway gauges.	**07**
	(b)	What is overlay? Which are the types of overlay? Describe the reasons which lead to overlay design.	**07**
		OR	
Q.5	**(a)**	What are the different causes of traffic accidents? Explain various measures to prevent accidents.	**07**
	(b)	Explain the function of different layers in the pavement with neat sketch. Which are the factors affecting the thickness of pavement layer?	**07**

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