Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 711304 **Date: 04-12-2014**

Subject Name: Basics of Transporatation Engineering

Time: 10:30 am - 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 economical 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)** Enlist the different surveys to be carried out before Transportation planning process. **07**

(b) What are the road user characteristics? Human and vehicular. **07**

OR

(b) Define Traffic volume, describe in detail traffic volume count procedure. **07**

Q.3 **(a)** Define the terms : - (i) study area, (ii) cordon line, (iii) trip generation, (iv) trip-attraction, (v) spot speed, (vi) head way, (vii) traffic flow. **07**

(b) What are the drawbacks of Transportation in present scenario? **07**

OR

Q.3 The following data was collected during traffic studies of a study area **14**

zone	1	2	3	4	5	6
Population (in thousands)	24	20	28	23	17	18
Trip generation (in hundred)	14	13	17.5	13	12	14.5

Develop linear regression, if in any zone the population is increase to 52500 predict the expected trips.

Q.4 **(a)** What are the policies and principles to be considered for any new railway broad-gauge line? **07**

(b) Draw the sketch of flexible and rigid pavements, describe also. **07**

OR

Q.4 **(a)** Draw the sketch of rotary intersection and grade separated intersection . **07**

(b) Describe the factors affecting Modal-splits. **07**

Q.5 **(a)** What are the steps to be carried out for economic evaluation of Transportation project. **07**

(b) What are the terminal facilities to be provided at a domestic airport? Also draw the s sketch. **07**

OR

Q.5 **(a)** Explain in detail:- any two methods of trip distribution showing trip matrix. **07**

(b) What is a necessity of parking ? draw layout of angular parking. 30° ,60°. **07**

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