

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2013

Subject code: 711304N**Date: 30-12-2013****Subject Name: Basics of Transportation 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) Give an overview of transportation system with brief descriptions 07
 (b) What are the social and economical functions of transportation in present Scenario ? 07
- Q.2** (a) Explain by drawing flow diagram transportation planning process 07
 (b) Define :- (i) zones (ii) land use (iii) trip (iv) internal trip (v) terminal time (vi) base year (vii) horizon year. 07

OR

- (b) What are the objectives of traffic volume count? describe manual method for The same. 07
- Q.3** The present flows of trips between four zones of a study area are shown in In following table. The future trip generation and attraction values are also Mentioned. Distribute the trips by Detroit and Furness method 14

D \ O	P	Q	R	S	Future out going
P	--	100	20	80	340
Q	20	--	30	20	98
R	20	70	--	80	282
S	10	10	20	--	52
Future in coming	70	288	90	324	772

OR

- Q.3** (a) Describe the road user characteristics 07
 (b) What is the necessity of speed studies? describe the procedure of speed and Delay studies. 07
- Q.4** (a) Draw any three sketches of traffic signs. 07
 (b) What is the significance of air transportation? describe the factors to be Considered for location of airport in city 07

OR

- Q.4** (a) What is role of railway transportation at national level ? describe different Railway gauges. 07
 (b) Explain ESWL(Equivalent single wheel load) 07
- Q.5** (a) Describe the procedure of origin and destination studies. Draw desire line Diagram. 07
 (b) What is requirement for parking studies? Draw layout of angular parking. 07

OR

- Q.5** (a) What are the different types of pavements? draw sketch of flexible pavements. 07
 (b) How pavement maintenance is carried out ? describe overlay design. 07
