

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

Subject code: 711302N**Date: 26-12-2013****Subject Name: Traffic Engineering 1****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 mark.

- Q.1** (a) Briefly explain the vehicular characteristics. **07**
 (b) Define the basic traffic flow parameters. Explain the relationship between the flow parameters with sketch. **07**

- Q.2** (a) Define- Space mean speed, Modal speed, Operating speed, Time headway, Space headway, Operational delay, Journey speed. **07**
 (b) Enlist the methods of traffic volume counts. Explain any two mechanical methods. **07**

OR

- (b) Calculate the following from the given data **07**
 (a) Modal speed,
 (b) Median speed
 (c) Time mean speed
 (d) Speed to be used in geometric design
 (e) Speed for traffic regulation
 (f) Standard deviation
 (g) Coefficient of variation

Speed class (kmph)	No. of vehicles observed
10 – 14.9	5
15 – 19.9	14
20 – 24.9	28
25 – 29.9	40
30 – 34.9	59
35 – 39.9	48
40 – 44.9	27
45 – 49.9	14
50 – 54.9	8
55 – 59.9	3

- Q.3** (a) Enlist the methods of O & D studies. Explain License plate method in detail. **07**
 (b) What are the purposes of Origin and Destination studies ? **07**

OR

- Q.3** (a) What are the common methods of on street parking? Explain with sketch. **07**
 (b) What are the ill effects of parking? **07**

- Q.4** (a) Write a short note on “Parking Meter”. **07**
 (b) What are the preventive measures for accidents? Explain in detail. **07**

OR

- Q.4** (a) Explain collision and condition diagram with sketch. **07**
 (b) Define - Space hour, Parking accumulation, Parking load, Practical capacity, Turn over, Parking duration, Regulatory signs. **07**

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| Q.5 | (a) | Explain about the road markings. | 07 |
| | (b) | What are the types of traffic signs? Explain each types with sketch. | 07 |
| OR | | | |
| Q.5 | (a) | Explain Moving observer method of travel time delay study. | 07 |
| | (b) | Which types of details are required to collect during parking study? | 07 |
