

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- VIII EXAMINATION – SUMMER 2020****Subject Code: 2170613****Date: 29/10/2020****Subject Name: TRAFFIC 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.

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|------------|------------|--|-----------|
| Q.1 | (a) | Explain various static vehicle characteristics affecting road design and traffic performance. | 03 |
| | (b) | Explain about the elements involved in traffic operation. | 04 |
| | (c) | Explain intersection volume count survey with typical survey format. | 07 |
| Q.2 | (a) | Indicate and explain how spacing of street lighting is decided. | 03 |
| | (b) | Explain various design factors for street lighting. | 04 |
| | (c) | Explain about visual factors of road users. | 07 |
| OR | | | |
| | (c) | Explain the psychological factors of road users. | 07 |
| Q.3 | (a) | Explain Enoscope method to measure spot speed of vehicle. | 03 |
| | (b) | What is condition and collision diagram ? Draw collision diagram of a typical accident spot. | 04 |
| | (c) | State methods of origin and destination studies. Explain any one in detail. | 07 |
| OR | | | |
| Q.3 | (a) | Illustrate with an example about time mean speed and space mean speed. | 03 |
| | (b) | What are the causes of accidents ? State the purposes of accident studies. | 04 |
| | (c) | Explain the methods of presentation of time and delay study data. | 07 |
| Q.4 | (a) | Explain types of pavement markings. | 03 |
| | (b) | Define following with respect to traffic signal :
Cycle length, Interval, Intergreen period, Peak hour factor | 04 |
| | (c) | Draw any ten traffic mandatory signs. | 07 |
| OR | | | |
| Q.4 | (a) | Draw a sketch of typical pavement marking at a T junction. | 03 |
| | (b) | Explain Webster's method of design of traffic signal. | 04 |
| | (c) | Draw any ten traffic warning signs. | 07 |
| Q.5 | (a) | Give classification of at grade intersections. | 03 |
| | (b) | Define: Luminous intensity, Metre candle, Illumination, | 04 |
| | (c) | Explain the principles of intersection design. | 07 |
| OR | | | |
| Q.5 | (a) | What is conflict point ? Show conflict points on one way cross road with one way regulation movement. | 03 |
| | (b) | Define: Luminous flux, Lumen, Candela, Glare | 04 |
| | (c) | What is the principle of rotary intersection ? Write advantages and disadvantages of rotary intersection. | 07 |
