

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3160615****Date:24-05-2024****Subject Name: Traffic Engineering and Management****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define: Spot speed, running speed, journey speed	03
	(b) State the scope of traffic engineering	04
	(c) Explain road user characteristics in detail.	07
Q.2	(a) Explain types of traffic in brief.	03
	(b) What is bottleneck situation in traffic? State the causes of it.	04
	(c) Explain fundamental relationship between traffic flow parameters with neat sketches.	07
OR		
	(c) Enlist the methods of traffic volume count. Explain various methods for presentation of traffic volume data.	07
Q.3	(a) Explain in brief the types of manoeuvres.	03
	(b) Describe the need of traffic forecasting	04
	(c) Enlist various methods of O-D survey. Explain road side interview survey.	07
OR		
Q.3	(a) Calculate space mean speed and time mean speed from the following spot speed data (in kmph) 65,68,51,43,68,54,52,58,44,38.	03
	(b) Explain the ill effects of parking.	04
	(c) Differentiate between Rotary and Roundabout.	07
Q.4	(a) Classify intersection in detail based in various aspects.	03
	(b) Define : cycle time, lost time, offset	04
	(c) Explain signal co-ordination.	07
OR		
Q.4	(a) Write a short note on Traffic Island.	03
	(b) Enlist various geometric design elements of rotary with neat sketch	04
	(c) Explain the Webster's method for signal design	07
Q.5	(a) State the advantages and disadvantages of full cloverleaf interchange.	03
	(b) Write a short note on tidal flow operation.	04
	(c) Explain causes and preventive measures of accidents	07

OR

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| Q.5 | (a) | Explain importance of ITS in traffic management | 03 |
| | (b) | Write a short note on PCU. | 04 |
| | (c) | Explain the concept of capacity and level of service with neat sketch | 07 |
