

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VI EXAMINATION - WINTER 2025

Subject Code: 116AF02

Date: 08-12-2025

Subject Name: Intelligent Transportation for Smart City

Time: 02:30 PM TO 05:00 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) What are the different scopes of ITS?	03
(b) Give advantages and disadvantages of ITS.	04
(c) Compare ITS with conventional transportation system.	07
Q.2 (a) Enlist various surveys needs to be carried out for data collection to plan ITS	03
(b) Write a note on role of command and control centre in ITS.	04
(c) Explain by drawing flowchart of various steps involved in transportation planning process.	07
OR	
(c) Write a short note on key components of ITS architecture.	07
Q.3 (a) Write a short note on Automatic Vehicle Control System.	03
(b) Enumerate ITS applications in the field of intermodal freight transport.	04
(c) Discuss the major reasons for security breach on ITS data. Mention and explain different types of attacks on ITS data.	07
OR	
(a) Write a short note on Automatic Vehicle Identification System.	03
(b) Enumerate the ITS applications for commercial vehicle operation.	04
(c) How ITS would be helpful in minimizing accidents on junction and on black spots?	07
Q.4 (a) Write a short note on smart route guidance system.	03
(b) Explain in detail pre-trip traveler information system.	04
(c) How ITS would be helpful in intersection management? Explain in detail about vehicle actuated signals.	07
OR	
(a) What is meant by congestion pricing?	03
(b) Write short note on Video detection in ITS.	04

- (c) Write a short note on Advanced Public Transport System (APTS) 07
- Q.5** (a) Write a short note on integrated automated highway system. 03
- (b) Explain in detail about intelligent travel demand management. 04
- (c) How will you implement ITS in your city? 07

OR

- (a) How ITS would be helpful in solving traffic congestion issues at bottlenecks? 03
- (b) Enlist various transportation system management techniques. Explain anyone in detail. 04
- (c) Explain various Government of India's initiatives regarding ITS. 07
