

Enrollment No./Seat No.:

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Bachelor of Engineering - SEMESTER - VI EXAMINATION - SUMMER 2025**

**Subject Code: 116AF02**

**Date: 11-06-2025**

**Subject Name: Intelligent Transportation for Smart City**

**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.**

	<b>Marks</b>
<b>Q.1 (a)</b> How can videography enhance the effectiveness of Intelligent Transportation System	<b>03</b>
<b>(b)</b> Give the difference between conventional approach and ITS approach.	<b>04</b>
<b>(c)</b> Identify the key features of an adaptive traffic control system.	<b>07</b>
<b>Q.2 (a)</b> Write a short note on advanced traveler information system	<b>03</b>
<b>(b)</b> Write advantages and disadvantages of electronic toll collection system.	<b>04</b>
<b>(c)</b> Write a short note on Vehicle Detection – Techniques.	<b>07</b>
<b>OR</b>	
<b>(c)</b> Give a brief overview of Dynamic Message Signs.	<b>07</b>
<b>Q.3 (a)</b> Discuss the advantages associated with the Electronic Toll Collection System.	<b>03</b>
<b>(b)</b> Explain various components of multi modal transportation hub.	<b>04</b>
<b>(c)</b> Describe the logical architecture of Intelligent Transportation Systems (ITS) and provide a clear diagram to illustrate your explanation.	<b>07</b>
<b>OR</b>	
<b>(a)</b> Explain the traffic volume survey.	<b>03</b>
<b>(b)</b> Write a short note on intelligent junction management techniques.	<b>04</b>
<b>(c)</b> Explain in brief role of GPRS into ITS.	<b>07</b>
<b>Q.4 (a)</b> What is meant by the concept of an Intelligent Transportation System	<b>03</b>
<b>(b)</b> Write the necessities for Intelligent transportation system planning.	<b>04</b>
<b>(c)</b> Write a short note on various tags used in ITS.	<b>07</b>
<b>OR</b>	
<b>(a)</b> What are the advantages of route guidance?	<b>03</b>
<b>(b)</b> Write a short note on Advance Transport Management System (ATMS)	<b>04</b>
<b>(c)</b> Explain in detail about scope of development for ITS framework in your city	<b>07</b>
<b>Q.5 (a)</b> Write the characteristics of advanced traveler information system.	<b>03</b>
<b>(b)</b> What do you understand by smart road safety system? Explain in detail	<b>04</b>

**(c)** Explain the benefits and challenges of Automated Highway Systems. **07**

**OR**

**(a)** Write a short note on road pricing **03**

**(b)** Explain in detail concept of coordinated traffic signals **04**

**(c)** Write a short note on fleet management. **07**

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