

Seat No./Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF ENGINEERING – SEMESTER 7 – EXAMINATION – SUMMER 2026

Subject Code: 3170628

Date: 05/06/2026

Subject Name: Infrastructure for smart Cities

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.**

- Q.1**
- | | | |
|-----|--|----|
| (a) | Explain the concept of smart city with its key requirements. | 03 |
| (b) | Discuss various objectives of smart cities. | 04 |
| (c) | Give detailed case studies of any two smart cities of India. | 07 |

- Q.2**
- | | | |
|-----|--|----|
| (a) | Write short note on GIFT City | 03 |
| (b) | State any two worldwide policies for smart cities. | 04 |
| (c) | Describe sustainable water and sanitation. What are issues and challenges of urban sanitation? | 07 |

OR

- Q.2**
- | | | |
|-----|--|----|
| (c) | Give challenges to solar power plants in India and solutions to overcome it. | 07 |
|-----|--|----|
- Q.3**
- | | | |
|-----|--|----|
| (a) | Write short note on Integrated Flood Management System. | 03 |
| (b) | Explain the concept of “Net Zero Energy Buildings.” | 04 |
| (c) | Define rainwater harvesting? Describe its methods and importance | 07 |

OR

- Q.3**
- | | | |
|-----|--|----|
| (a) | Explain phases of disaster management cycle. | 03 |
| (b) | Describe affordable housing in smart cities. | 04 |
| (c) | Explain flood forecasting and warning systems in India | 07 |

- Q.4**
- | | | |
|-----|---|----|
| (a) | State aims of solar smart city | 03 |
| (b) | List out various features of smart cars. | 04 |
| (c) | Define a smart grid? Discuss its need, features, and applications in India. | 07 |

OR

- Q.4**
- | | | |
|-----|--|----|
| (a) | Explain importance of cyber security in smart cities? | 03 |
| (b) | Write short note on Innovative Sanitation Solutions for smart cities | 04 |
| (c) | Define green building? Explain its concept and importance. | 07 |

- Q.5**
- | | | |
|-----|--|----|
| (a) | Explain the role of GPS in transport management. | 03 |
| (b) | State various advantages of e-ticketing. | 04 |
| (c) | Define Intelligent Transportation System (ITS). Discuss its purposes and applications. | 07 |

OR

Q.5	(a) Write short note on solar vehicles.	03
	(b) Write short note on hybrid vehicles as fuels of the future	04
	(c) Discuss various pan city projects undertaken by smart city Ahmedabad	07
