

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE(MINOR)- SEMESTER-I&II EXAMINATION – SUMMER 2025****Subject Code:115AF01****Date:03-06-2025****Subject Name: Sustainable 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) Define Sustainable smart city (SSC) and sustainable development.            | 03    |
|     | (b) Give a brief history of smart city in India.                                | 04    |
|     | (c) Explain the quality of life in the smart city.                              | 07    |
| Q.2 | (a) What are the principles of Green building?                                  | 03    |
|     | (b) Give a brief history of smart city in world.                                | 04    |
|     | (c) Explain the Worldwide policies for smart city in India.                     | 07    |
|     | <b>OR</b>                                                                       |       |
|     | (c) Explain the Worldwide policies for smart city in United nations.            | 07    |
| Q.3 | (a) What is Green Technology?                                                   | 03    |
|     | (b) List out the steps for selection of smart cities.                           | 04    |
|     | (c) What are the Climate change indicators and their meaning for cities?        | 07    |
|     | <b>OR</b>                                                                       |       |
| Q.3 | (a) Draw the changing pattern of Urban growth.                                  | 03    |
|     | (b) Write a short note on challenges and measures for smart city.               | 04    |
|     | (c) Explain any two Green Technologies systems.                                 | 07    |
| Q.4 | (a) What are the objectives of smart city?                                      | 03    |
|     | (b) What are the different patterns of urban growth? Explain any two.           | 04    |
|     | (c) What is ICT? How it is useful in management of a city?                      | 07    |
|     | <b>OR</b>                                                                       |       |
| Q.4 | (a) Differentiate "Smart city" and "sustainable smart city".                    | 03    |
|     | (b) What is LEED certification? Explain the levels of LEED certification.       | 04    |
|     | (c) Explain the types of green infrastructure?                                  | 07    |
| Q.5 | (a) Describe the function of intelligent transportation system.                 | 03    |
|     | (b) How you improve water efficiency in smart city.                             | 04    |
|     | (c) Explain different rating system available for green building.               | 07    |
|     | <b>OR</b>                                                                       |       |
| Q.5 | (a) Give the advantages and disadvantages of intelligent transportation system. | 03    |
|     | (b) What are the benefits of GRIHA certification?                               | 04    |
|     | (c) What is IGBC? Explain the scope of IGBC in Green Cities Rating System?      | 07    |

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