

Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE(MINOR)- SEMESTER-I&II EXAMINATION – SUMMER 2025

Subject Code:N114AF01

Date:03-06-2025

Subject Name:Fundamentals of Smart City Planning

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.

- Q.1**
- (a) Define a Smart City. List any three objectives of a Smart City. **03**
- (b) Explain the key concepts of a Smart City. **04**
- (c) Describe the features of smart cities. What are the requirements of smart cities? **07**

- Q.2**
- (a) Which are the key technologies needed for smart city. **03**
- (b) Give advantages and disadvantages of smart city. **04**
- (c) Write the role of stakeholders in Smart City development. **07**

OR

- (c) Write short note on: Key Trends in Smart Cities Development. **07**
- Q.3**
- (a) Explain the meaning of smart city planning? **03**
- (b) What are practice codes, and why are they essential in smart city development? **04**
- (c) Discuss the major components of smart city planning and development in India. **07**

OR

- Q.3**
- (a) What is the purpose of a Special Purpose Vehicle (SPV) in smart city governance? **03**
- (b) What is e-ticketing and how is it useful? **04**
- (c) Discuss the importance and applications of GIS and GPS in smart cities. **07**
- Q.4**
- (a) What is the significance of project monitoring tools in smart city development? **03**
- (b) Explain the role of cybersecurity in smart city infrastructure. **04**
- (c) What is navigation system? Explain any one navigation system **07**

OR

- Q.4** (a) Define smart housing and mention any two features. **03**
(b) Which are the benefits of using solar energy in smart cities. **04**
(c) Explain how project management supports smart city development **07**
- Q.5** (a) Write the advantages of Intelligent Transport System (ITS). **03**
(b) What is a green building? Which are the features of green buildings. **04**
(c) How lighting design can be an energy saving parameter in making building energy efficient? **07**

OR

- Q.5** (a) Name the green building rating systems used in India. And explain any one from that. **03**
(b) Write the challenges in implementing green buildings in Indian smart cities. **04**
(c) Explain the significance of green buildings in the development of smart cities. **07**
