

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code: 3170628****Date: 27/12/2021****Subject Name: Infrastructure for smart Cities****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.

|            |   | <b>MARKS</b> |
|------------|---|--------------|
| <b>Q.1</b> | (a) Write about the goals of smart cities.                                    | <b>03</b>    |
|            | (b) Explain public safety and security in a smart city.                       | <b>04</b>    |
|            | (c) What are the factors required to become a smart city?                     | <b>07</b>    |
| <b>Q.2</b> | (a) Write about the environmental benefits of green building.                 | <b>03</b>    |
|            | (b) Write a brief note on history of smart cities in India.                   | <b>04</b>    |
|            | (c) What are the different types of infrastructure systems? Explain.          | <b>07</b>    |
|            | <b>OR</b>   |              |
|            | (c) List down and explain the features of green building.                     | <b>07</b>    |
| <b>Q.3</b> | (a) Explain different types of cyber threats.                                 | <b>03</b>    |
|            | (b) Describe infrastructure need assessment.                                  | <b>04</b>    |
|            | (c) List down and explain the features of smart cities.                       | <b>07</b>    |
|            | <b>OR</b>   |              |
| <b>Q.3</b> | (a) What are the different phases of disaster management cycle?               | <b>03</b>    |
|            | (b) Write about the application of GIS in transportation.                     | <b>04</b>    |
|            | (c) Explain the concept of E-ticketing.                                       | <b>07</b>    |
| <b>Q.4</b> | (a) Write the advantages of ITS.  | <b>03</b>    |
|            | (b) What is smart mobility and how it can be improved?                        | <b>04</b>    |
|            | (c) Give your views on road safety policies.                                  | <b>07</b>    |
|            | <b>OR</b>   |              |
| <b>Q.4</b> | (a) Give some suggestions to improve existing water conveyance system.        | <b>03</b>    |
|            | (b) What are the issues and challenges with existing urban sanitation system? | <b>04</b>    |
|            | (c) Write about the IOT based smart wastewater management system.             | <b>07</b>    |
| <b>Q.5</b> | (a) Write a note on water-meters.   | <b>03</b>    |
|            | (b) Describe flood forecasting and warning systems in India.                  | <b>04</b>    |
|            | (c) Write a note on water resources conservation.                             | <b>07</b>    |
|            | <b>OR</b>   |              |
| <b>Q.5</b> | (a) What is the need of integrated approach of infrastructure management?     | <b>03</b>    |
|            | (b) Explain how urbanisation is connected to environment.                     | <b>04</b>    |
|            | (c) Write about any two case-studies of smart cities in India                 | <b>07</b>    |

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**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2022****Subject Code:3170628****Date:06/06/2022****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) Enlist the objectives of smart cities. **03**  
(b) Describe the features of smart cities. **04**  
(c) Explain the concept of smart city. What are the requirements of smart cities? **07**
- Q.2** (a) Write about the economic benefits of green building. **03**  
(b) What is green building? Explain concept of green building. **04**  
(c) Discuss key technologies needed for smart city. **07**
- OR**
- (c) Give advantages and disadvantages of smart city. **07**
- Q.3** (a) What is Intelligent Transportation System (ITS)? **03**  
(b) What is smart mobility and how it can be improved? **04**  
(c) Give your views on road safety policies. **07**
- OR**
- Q.3** (a) What is disaster management cycle? **03**  
(b) Write about the application of GIS in transportation. **04**  
(c) Explain the concept of E-ticketing. **07**
- Q.4** (a) Explain different types of cyber threats. **03**  
(b) What are the issues and challenges with existing urban sanitation system? **04**  
(c) Write about the IOT based smart wastewater management system. **07**
- OR**
- Q.4** (a) Give some suggestions to improve existing water conveyance system. **03**  
(b) What is smart car? Give features of smart cars. **04**  
(c) Give recommendations for infrastructure improvement and vehicle technology for traffic safety. **07**
- Q.5** (a) What do you mean by smart water management? **03**  
(b) Explain how urbanization is connected to environment. **04**  
(c) Describe various flood mitigation measures. **07**
- OR**
- Q.5** (a) What is smart city challenge? **03**  
(b) Describe flood forecasting and warning systems in India. **04**  
(c) Write a note on water resources conservation. **07**

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