

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2024****Subject Code:3170628****Date:11-12-2024****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.

**MARKS**

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|------------|---|-----------|
| <b>Q.1</b> | (a) Write the difference between a city and smart city.   | <b>03</b> |
|            | (b) What are the advantages of smart city?  | <b>04</b> |
|            | (c) What are the smart city challenges and measures? Explain in brief   | <b>07</b> |
| <b>Q.2</b> | (a) List out the objectives of green building?  | <b>03</b> |
|            | (b) Explain smart grid and its requirement in India?  | <b>04</b> |
|            | (c) Explain early warning system (EWS). List out different agencies with their areas for monitoring and early warning in India. | <b>07</b> |
| <b>OR</b>  |   |           |
|            | (c) What are the issues and challenges for solar power plants in India? How to overcome the challenges?                         | <b>07</b> |
| <b>Q.3</b> | (a) Define the concept of smart vehicles.   | <b>03</b> |
|            | (b) Write in brief about fuels for future.  | <b>04</b> |
|            | (c) Give your views on road safety policies. Explain National road safety policy 2010 in brief.                                 | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.3</b> | (a) List out various smart transport system for smart cities.   | <b>03</b> |
|            | (b) Explain different types of cyber threats.   | <b>04</b> |
|            | (c) Define Intelligent Transportation System (ITS)? Write the advantages of ITS   | <b>07</b> |
| <b>Q.4</b> | (a) Explain water smart city (WSC) concept.   | <b>03</b> |
|            | (b) Describe innovative sanitation solutions for smart cities.  | <b>04</b> |
|            | (c) Explain the free flow and pressurized water conveyance system.  | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.4</b> | (a) List out various infrastructure for smart city.   | <b>03</b> |
|            | (b) Write short note on advantages of rain water harvesting.  | <b>04</b> |
|            | (c) Discuss the issues and challenges with existing urban sanitation system?  | <b>07</b> |
| <b>Q.5</b> | (a) Write a note on water-meters.   | <b>03</b> |
|            | (b) Write short note on Gift city project.  | <b>04</b> |
|            | (c) Write a case study of smart city with SWOT analysis for Ahmedabad   | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.5</b> | (a) Write in brief about pan city project.  | <b>03</b> |
|            | (b) List out the application of GPS in transportation   | <b>04</b> |
|            | (c) Explain in details integrated flood management system.  | <b>07</b> |

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