

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2021****Subject Code:3140609****Date:06/09/2021****Subject Name:Civil Engineering - Societal & Global Impact****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) What is global warming ? What are its causes and effects? 03
(b) Write short note on Building Information Modelling. 04
(c) Describe recent major civil Engineering breakthroughs and innovation. 07
- Q.2** (a) What is GIS? Give applications of GIS. 03
(b) Describe the impotence of civil engineering in shaping the world. 04
(c) Describe modern civil engineering Marvels and wonders. Explain any three. 07
- OR**
- (c) Explain the concept of smart city. What are the requirement of smart cities? 07
- Q.3** (a) Explain Importance of Infrastructure. 03
(b) Describe Indian government Initiatives for water Conservation. 04
(c) What are the improvements in the technology of underground tunnel construction? 07
- OR**
- Q.3** (a) Write short note on Smart future Road and Railway. 03
(b) Explain the concept of smart city. What are the requirement of smart cities? 04
(c) What are the improvements in the technology of underground tunnel construction? 07
- Q.4** (a) Write short note on: Rainwater Harvesting. 03
(b) Enlist futuristic energy sources and describe Hydropower. 04
(c) What is solid waste management? What are its objectives? 07
- OR**
- Q.4** (a) Write short note on: Smart Waste Technology. 03
(b) Describe futuristic methods of solid waste management. 04
(c) Enlist major air pollution with their sources and effects. 07
- Q.5** (a) Explain measure for climate control in built environment. 03
(b) Write short note on : Recycling of materials. 04
(c) Define : Repair, Restoration and Retrofitting. And Describe methodology for the repair of structures. 07
- OR**
- Q.5** (a) Enlist various civil engineering projects. 03
(b) Write short note on :- Cavity wall for thermal insulation. 04
(c) Suggest various health and safety measures in construction projects. 07
