

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) EXAMINATION – WINTER 2022****Subject Code:3140609****Date:15-12-2022****Subject Name:Civil Engineering - Societal & Global Impact****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
Q.1 (a) What is GIS? Give applications of GIS.	03
(b) Write short note on Building Information Modelling.	04
(c) Write a short note on Green Revolution in India	07
Q.2 (a) Describe the impotence of civil engineering in shaping the world.	03
(b) What are the challenges of mega cities?	04
(c) Explain the concept of smart city. Also explain the requirements of smart cities.	07
OR	
(c) Describe recent major civil Engineering breakthroughs and innovation.	07
Q.3 (a) Discuss future innovations at airports?	03
(b) Write short note on Smart future Road and Railway.	04
(c) Discuss in detail various methodologies for ensuring Sustainability in construction.	07
OR	
Q.3 (a) Enlist and describe in short any 2 ancient and any 2 modern Civil engineering Marvels	03
(b) Write a short note on: Hyper loops.	04
(c) What are the improvements in the technology of underground tunnel construction?	07
Q.4 (a) What do you understand by environmental metrics? Explain.	03
(b) Enlist futuristic energy sources and describe Hydropower.	04
(c) Describe sources of air pollution.	07
OR	
Q.4 (a) What are the objectives of solid waste management?	03
(b) Write short note on: Rainwater Harvesting.	04
(c) Explain in detail how interlinking of dams, canals and rivers help in controlling floods.	07
Q.5 (a) Explain measure for climate control in built environment.	03
(b) Write short note on: Recycling of materials.	04
(c) Discuss in detail contribution of Civil engineering in employment in India.	07
OR	
Q.5 (a) What is the role of Urban Arts Commission?	03
(b) Write a short note on societal and global impact of civil Engineering.	04
(c) What is EIA? What are the purposes of EIA? Explain stages of EIA.	07
