

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-IV EXAMINATION – WINTER 2025****Subject Code:3140609****Date:18-11-2025****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.

		Marks
Q.1	(a) Write short note on: Rainwater Harvesting	03
	(b) Write short note on: Recycling of materials.	04
	(c) Write a short not on Green house effect.	07
Q.2	(a) What is GIS? Give applications of GIS.	03
	(b) Explain three pillars of Sustainability.	04
	(c) Enlist major air pollution with their sources and effects	07
	OR	
	(c) Write a short note on conventional methods of water purification.	07
Q.3	(a) What is the effect of global warming?	03
	(b) Explain challenges of megacities.	04
	(c) Write a short not on flood control measures.	07
	OR	
Q.3	(a) Write advantages and disadvantages of automation.	03
	(b) Explain in detail incineration.	04
	(c) Describe smart buildings in detail.	07
Q.4	(a) Write a role of civil engineering in infrastructure development.	03
	(b) Write a short note on solar chimney.	04
	(c) Write a short note on leadership in energy and environmental design.	07
	OR	
Q.4	(a) What you understand by hyper loop in smart future railways.	03
	(b) Explain sustainability during project development.	04
	(c) Write a short note on contribution to growth through reductions in costs in impact of infrastructure on development of nation.	07
Q.5	(a) Explain pre-chlorination and Post chlorination.	03
	(b) Write short note on: needs for infrastructure regulation.	04
	(c) Write a short note on health and safety aspects for stakeholders in construction projects.	07
	OR	
Q.5	(a) Explain cavity wall.	03
	(b) Enlist futuristic energy sources and describe Hydropower.	04
	(c) Write a short note on security systems in built environment.	07