

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 3170629

Date: 20-11-2025

Subject Name: Green Built Environment

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 sustainability? Why is it important for development to be sustainable?	03
(b) Write methods of saving & recycling water in your house.	04
(c) How can indoor environment quality be maintained? What are the various steps that can be taken to ensure the same?	07
Q.2 (a) What are the parameters of checking water quality. How does bad quality affect human health?	03
(b) List the types of Roof & Non-Roof.	04
(c) Write about the various sustainable construction materials and explain how they are advantageous over conventional construction materials.	07
OR	
(c) What will you suggest for maintaining energy efficiency in a new building construction?	07
Q.3 (a) Write about the current water-crisis in our country. List its causes.	03
(b) What are local building regulations? State a few of them.	04
(c) List the causes of Soil Erosion and state why it is harmful with some real life examples. Also list its control measures.	07
OR	
(a) How does natural topography influence building design?	03
(b) What are HCFCs? Why should equipment be HCFC free?	04
(c) Explain the Heat Island effect. List strategies to mitigate it.	07
Q.4 (a) List and state the functions of various Water Efficient Plumbing Fixtures.	03
(b) What are the various alternative constructions materials along with how their use is incorporated in construction.	04
(c) Explain Enhanced Rain Water Harvesting? List its key components.	07

OR

- (a) State the importance of Minimum Energy Performance. 03
- (b) What are certified green products? List a few certification agencies for the same. 04
- (c) List the techniques of Recycling & Reusing of Waste water. 07
- Q.5** (a) Define Enhanced Energy Performance. List its components. 03
- (b) What are VOCs? Describe Low VOC Materials and their benefits in indoor environments. 04
- (c) Explain in detail the role of alternate water heating systems in reducing energy consumption. 07

OR

- (a) List the types of Renewable Energy Systems for Common Area Lighting. 03
- (b) Discuss any 2 case studies which have successfully demonstrated sustainable building practices 04
- (c) Write a note on the Green procurement policy. What are its benefits and challenges? 07
