

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering - SEMESTER - III EXAMINATION - WINTER 2025

Subject Code: 3130607

Date: 12-12-2025

Subject Name: Building Construction Technology

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) Enlist different types of shallow foundations with neat sketches	03
(b) Explain the failures of foundations and suggest remedial measures.	04
(c) Describe pile driving methods and discuss causes of failure of piles.	07
Q.2 (a) Discuss different types of stone masonry joints with sketches	03
(b) Differentiate between brick masonry and stone masonry.	04
(c) Describe composite masonry construction and its applications.	07

OR

(c) Explain arches and lintels – types, construction, and suitability with sketches.	07
Q.3 (a) State the essential requirements of a good form work.	03
(b) Write a short note on slip form work.	04
(c) Differentiate between pre-cast and cast-in-situ concrete construction.	07

OR

(a) Explain factors affecting selection of doors and windows in buildings.	03
(b) Explain the Glaze and sash door with a figure.	04
(c) Describe the design considerations of staircases with examples.	07
Q.4 (a) List the requirements of a good flooring system.	03
(b) Write a short note on terraced roofing systems with advantages and disadvantages.	04
(c) Describe in detail classification of roofs and roof coverings with sketches.	07

OR

(a) Define scaffolding and its types with neat sketches.	03
(b) Write notes on shoring and underpinning.	04
(c) Discuss the construction and applications of cofferdams.	07
Q.5 (a) Describe various types of termites.	03

(b) Write short note on Fire-resistant construction. **04**

(c) Explain the principles of green building design and discuss the rating system for green buildings in India. **07**

OR

(a) What are the advantages of 3D printing technology in building construction? **03**

(b) Explain various defects in painting. **04**

(c) Prepare a case study of a green building highlighting its sustainable features. **07**
