

Enrollment No./Seat No.:

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

Subject Code: BE03006031

Date: 19-12-2025

Subject Name: Building Construction and 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) Define the term caisson. Explain the various uses of caissons.	03
(b) Differentiate between cast in situ piles and precast piles.	04
(c) Enlist the various geophysical methods of soil exploration. Describe with neat sketch any one geophysical method of soil exploration.	07
Q.2 (a) Explain the various advantages of cavity wall.	03
(b) Define the term : 1) Bed, 2) Perpend, 3) Frog, 4) Parapet.	04
(c) Differentiate between English bond & Flemish bond.	07
OR	
(c) What do you meant by an arch. Draw a neat sketch of Elements of an arch.	07
Q.3 (a) What are the various characteristics of a good or ideal paint?	03
(b) What are the general rules to be observed to avoid the failure of formwork for concrete structure?	04
(c) Explain 1) Water cement ratio, 2) Workability of concrete.	07
OR	
(a) What are the requirements of good plaster?	03
(b) Write a short note on Slip formwork.	04
(c) Write the advantages and disadvantages of precast and cast in situ concrete.	07
Q.4 (a) What are the characteristics of green building.	03
(b) What are the causes of fire? What precautionary measures taken to minimize the danger of fire?	04
(c) Enlist the various types of scaffolding. Explain Brick layer's scaffolding with sketch.	07
OR	
(a) What are the advantages of Thermal Insulation?	03
(b) What are the factors affecting the choice of particular type of cofferdam?	04

- (c) What are the different types of shoring used in construction? Explain the Raking shore in detail with sketch. 07
- Q.5** (a) Define the term : Flight, Landing, Soffit 03
- (b) What are the points to be kept in view, while locating doors and windows? 04
- (c) Mention the essential requirements of a floor and factors affecting selection of flooring material. 07

OR

- (a) What are the essential requirements of a good roof? 03
- (b) What are the requirements of good stairs? 04
- (c) Classify the various types of flooring. Explain Brick flooring with sketch, Merits & Demerits. 07
