

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Arch - SEMESTER-V EXAMINATION – WINTER 2025

Subject Code:2X55002

Date:12-11-2025

Subject Name: Building Construction Drawing-V

Time:10:30 AM TO 01:30 PM

Total Marks:40

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	Explain the following with sketches (Any 2)	10
	(a) Explain retaining wall with detail sketch. Write safety factor against overturning of Retaining wall. Enlist different types of stresses working on it.	
	(b) Mention advantages and disadvantages of structural steel. Also show different rolled steel sections used in building with neat sketches.	
	(c) Explain with sketches column to beam connection, column to foundation connections in precast concrete.	
Q.2	(a) Explain HVAC system and its main components.	05
	(b) Describe types of Elevators used for high rise buildings.	05
	OR	
	(b) Draw a typical steel column footing detail supporting wide flange steel column with a reinforced concrete pier column.	05
Q.3	Answer the following:	05
	(a) Describe schematic plan & section of escalator and identify various components of the escalator.	
	(b) Explain lacings, battening and bracings with detail sketch.	05
	OR	
Q.3	Explain Vault as structural system. Draw schematic detail section to explain vault system with its structural components. Assume and specify material used for Vault structure.	10
Q.4	(a) Draw and explain various components of a footing for steel column.	05
	(b) Explain Cantilever footing and Raft footing with sketch	05
	OR	
	(b) Difference between load bearing and frame structural system.	05
