

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF ENGINEERING – SEMESTER 3 – EXAMINATION – SUMMER 2026

Subject Code: 3130607

Date: 17/06/2026

Subject Name: Building Construction Technology

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.**

- Q.1** (a) Define the following terms with neat sketches: (i) Frog, (ii) Header, (iii) Stretcher, (iv) Plinth **03**
- (b) Explain factors affecting selection of foundation type. **04**
- (c) Write a short note on ingredients of concrete and their functions. **07**
- Q.2** (a) What are the principles of green building? **03**
- (b) Explain thermal insulation and acoustic treatment in buildings. **04**
- (c) Describe different types of doors with sketches and suitability. **07**
- OR
- Q.2** (c) Draw a neat sketch of staircase and explain: (i) Rise, (ii) Going, (iii) Nosing, (iv) Headroom **07**
- Q.3** (a) Differentiate between load bearing wall and framed structure. **03**
- (b) Explain brick masonry bonds with sketches. **04**
- (c) Describe construction of cavity wall and its advantages. **07**
- OR
- Q.3** (a) Explain the necessity of timbering in trenches. **03**
- (b) Discuss methods of dewatering in excavation. **04**
- (c) Explain coffer dams with types and applications. **07**
- Q.4** (a) Classify pile foundations with neat diagram/chart. **03**
- (b) Explain causes of failure of pile foundation. **04**
- (c) Explain construction procedure of caisson foundation. **07**
- OR
- Q.4** (a) Define sill, lintel, and jamb. **03**
- (b) Explain factors affecting selection of windows. **04**
- (c) Draw neat sketches of different types of stairs. **07**
- Q.5** (a) Explain advantages of precast construction. **03**
- (b) Explain types of flooring and selection criteria. **04**
- (c) Explain types of roof coverings used in pitched roofs. **07**
- OR
- Q.5** (a) What is 3D printing in construction? State its applications. **03**
- (b) Explain characteristics of good paint. **04**
- (c) Draw neat sketches of formwork for beam, slab, and column. **07**
