

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– III (New) EXAMINATION – WINTER 2019****Subject Code: 3130607****Date: 28/11/2019****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.

- Q.1** (a) Explain the water-cement ratio and the workability of concrete. **03**
 (b) What is meant by Green Building? Explain in brief. **04**
 (c) What are the causes of the failure of the foundation? What remedial measures would you adopt? **07**
- Q.2** (a) Explain about pre-cast and cast-in situ construction. **03**
 (b) Draw a sketch of the Cavity wall & give its purposes. **04**
 (c) What do you understand by scaffolding? What are the components of a scaffold? **07**
- OR**
- (c) What is meant by the “Shallow foundation”? Explain the various types of shallow foundations. **07**
- Q.3** (a) Enlist various points to be remembered during any building construction site visit as a Civil Engineer. **03**
 (b) Explain the classification of windows and discuss any one of them with a neat sketch **04**
 (c) Give a pointwise comparison between stone masonry and brick masonry. **07**
- OR**
- Q.3** (a) Draw a neat sketch of one brick thick English bond and describe the characteristics of the English bond. **03**
 (b) Discus anti-termite treatment for a building. **04**
 (c) Explain the following in relation to roof (with a figure): **07**
 (a) Rise (b) Ridge (c) Common rafter (d) Principal rafter (e) Cleat (f) Purlin (g) Pitch
- Q.4** (a) Draw a label diagram of a typical door. **03**
 (b) Give the difference between plastering and pointing in brief. **04**
 (c) Define underpinning. Explain the pit method of underpinning with the sketch. **07**
- OR**
- Q.4** (a) Explain in brief the essential requirements of a good floor. **03**
 (b) What is meant by the tilting of caissons? What are its reasons? **04**
 (c) Write a short note on ‘Termites and their attack on building’. **07**
- Q.5** (a) I. Sketch three types of joints in stone masonry **03**
 (b) II. Write in brief about Acoustical construction **04**
 (c) Enlist various methods of subsurface investigation. Explain any two in brief with neat and clean sketches. **07**
- OR**
- Q.5** (a) Explain any one case study of Green Building. **03**
 (b) Explain with sketch: (a) Segmental arch (b) RCC Lintel **04**
 (c) Draw a neat sketch: (a) Framed and Panelled Door **07**
 (b) Dog-legged stairs
