

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2021**

**Subject Code:3130607****Date:08/09/2021****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.

- Q.1** (a) What is meant by Green Building? Explain in brief. **03**  
 (b) Define 'Building'. Explain its components. **04**  
 (c) What are the causes of failure of foundation? What remedial measures would you adopt? **07**
- Q.2** (a) Explain the water-cement ratio and the workability of concrete. **03**  
 (b) Enlist various points to be remembered during any building construction site visit as a Civil Engineer. **04**  
 (c) Enlist the various methods of sub-soil exploration. Explain wash boring with sketch. **07**
- OR**
- (c) Give a point-wise comparison between stone masonry and brick masonry. **07**
- Q.3** (a) Draw a sketch of Cavity wall & give its purposes. **03**  
 (b) Describe briefly Hollow Tiled Ribbed flooring with sketch. **04**  
 (c) What do you understand by scaffolding? Describe Single scaffolding with sketch. **07**
- OR**
- Q.3** (a) Which are the remedial measures to prevent caisson diseases? **03**  
 (b) Draw neat sketch of RCC lintel with chhaja. **04**  
 (c) Explain the classification of windows and discuss any one of them with a neat sketch. **07**
- Q.4** (a) Draw a label diagram of a typical door. **03**  
 (b) Describe Jack arch flooring with sketch. **04**  
 (c) Describe the following staircase with sketch. **07**  
 a) Doglegged staircase, b) Geometrical stair
- OR**
- Q.4** (a) Enlist various roofing material. **03**  
 (b) Sketch three types of joints in stone masonry **04**  
 (c) Define underpinning. Explain the pit method of underpinning with the sketch. **07**
- Q.5** (a) Explain with sketch: (a) Segmental arch, (b) Framed and Panelled Door **03**  
 (b) Give classification of Lintel and explain any one in detail. **04**  
 (c) Draw the typical sketches, showing the following and define them: a) Corbel, **07**  
 b) Jambs, c) Frog, d) Queen closer e) King closer f) Coping, g) Stretcher
- OR**
- Q.5** (a) What is the difference between plastering and pointing? **03**  
 (b) Discuss various precautionary measures of fire. **04**  
 (c) What is the difference between pre cast & cast in situ concrete? Explain the process of manufacturing pre cast products. **07**

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