

**PARUL UNIVERSITY**  
**FACULTY OF ARCHITECTURE & PLANNING**  
**B.Arch.Summer 2018-19 Examination**

**Semester: 4****Date: 20/05/2019****Subject Code: 01101252****Time: 10:00 am to 01:00 pm****Subject Name: Building Materials & Construction Technology IV****Total Marks: 50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever required.
4. Draw suitable sketches wherever required.

- Q.1** Assume a lawyer's office of 3.5 m inner width and 5 m inner length, and design false ceiling for the same. Draw reflected ceiling plan, sections and details of the same in an appropriate scale with material specifications. **(10)**
- Q.2** Attempt any five out of the following six: **(20)**
- 1) Define the following:  
a) Cavity walls                      b) Shoring                              c) Scaffolding                      d) Precast concrete
  - 2) Write advantages of reinforced cement concrete.
  - 3) Sketch the following:  
a) Wall ties                                      c) Formwork of column  
b) Single flying shoring                      d) Strutting
  - 4) Explain with sketches: details of cavity wall for flat and inclined roofs.
  - 5) What is green concrete? How it's made and what are the advantages of using green concrete?
  - 6) Mention factors to be considered for designing and locating elevators in a building.
- Q.3** Explain the following in brief: (Any five) **(10)**
- 1) Shuttering.
  - 2) Hydraulic lift
  - 3) Partition wall
  - 4) Qualities of good framework
  - 5) Explain briefly partitions and paneling
  - 6) Dumbwaiter
- Q.4** Explain the following: (Any two) **(10)**
- 1) Enlist different types of partition wall with introduction of each.
  - 2) Sketch and explain single scaffolding and double scaffolding.
  - 3) What is elevator? Classify elevator based on its purpose.