

**PARUL UNIVERSITY**  
**FACULTY OF ARCHITECTURE**  
**B.Arch., Winter 2017-18 Examination**

**Semester: 5****Subject Code: 01101302****Subject Name: Building Materials & Construction Technology-V****Date: 04/12/2017****Time: 02:00 pm to 5:00 pm****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** Sketch any three types of shallow foundation and explain the situation where they can be used. **(10)**

**Q.2** Attempt any five out of the following six. **(20)**

1. Define the following:-
  - a) Thermal insulation.
  - b) Convection.
  - c) Total thermal resistance.
  - d) Thermal resistance.
2. Explain one way slab and two way slab with sketches.
3. Write short note on raft foundation.
4. Explain the safety measures to be taken during building construction.
5. Write short note on Anti-termite treatment.
6. Explain steel as a building material.

**Q.3** Explain the following in brief. (Any five) **(10)**

1. Column to footing connection in steel structure.
2. Column to column connection in steel structure.
3. Step footing.
4. Built up section.
5. Lacing.
6. Bracing.

**Q.4** Answer any two out the following three. **(10)**

1. Explain the importance of curing in concrete structures.
2. Sketch any two types of retaining wall.
3. Write short note on well foundation.