

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

Semester: 5**Date: 22/04/2019****Subject Code: 01101302****Time: 10:00 am to 01:00 pm****Subject Name: Building Materials & Construction Technology- V****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** Draw neat sketches of any five built up steel sections (column/beam). Mention the rolled steel section and types of joint used in each of the built-up section. **(10)**
- Q.2** Attempt any five out of the following six. **(20)**
1. Explain the following:
a) Thermal Insulation b) Total Thermal Resistance c) Semi- Gravity Retaining wall d) Convection
 2. Define the following:
a) Bolting b) Conductance c) Footing d) Insulator
 3. Mention and explain the types of slabs with relevant sketches.
 4. Explain the safety measures to be taken during building construction.
 5. Mention and explain the types of Anti-termite treatment.
 6. Explain the physical properties of steel by comparing it with timber and concrete.
 7. Give a difference between Raft Foundation and Grillage foundation.
- Q.3** Explain the following: (any five) **(10)**
- a) Thermal Resistance.
 - b) Disadvantages of Waffle slab.
 - c) Lacing & Bracing
 - d) Causes of Dampness in a building.
 - e) Beam to Beam connection in steel structure.
 - f) composition of RCC & PCC.
- Q.4** Answer any two out of the following three **(10)**
- a) Enlist types various types of deep foundation and shallow foundation.
 - b) Sketch any two types of Retaining wall
 - c) Define Vault. Enlist and Sketch types of Vaults.