

**PARUL UNIVERSITY**  
**FACULTY OF ARCHITECTURE AND PLANNING**  
**B.Arch./ B.ID Winter 2019-20 Examination**

Semester: 1

Subject Code: 01101102

Subject Name: Building Materials &amp; Construction Technology -I

Date: 16/12/2019

Time: 2:00 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** What is Brick Bond? Enlist various types of brick bonds. And draw the elevation, plan & isometric view of Flemish bond. **(10)**

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

- 1) Define the following: - i) Pointing. ii) Lintel iii) Stretcher iv) Mortar
- 2) Explain the following: i) Rammed Earth technique. ii) Hand Wash test
- 3) Write short note on mud as building materials.
- 4) Differentiate the following with necessary sketches
  - i. Sympodial Bamboo vs. Monopodial Bamboo
  - ii. Brick Masonry vs Mud Construction.
- 5) Sketch the following:
  - i) Flat arch, ii) Bullnose brick iii) Beveled Closer iv) Rat trap,
- 6) Fill in the blanks:
  - i. \_\_\_\_\_ is the highest wedge-shaped piece in a masonry arch.
  - ii. A mixture of cement, sand and water used in a masonry that acts as a bonding agent is called \_\_\_\_\_.
  - iii. Very fine form of sand in which you cannot see individual grains is known as \_\_\_\_\_.
  - iv. The Traditional brick size is \_\_\_\_\_ mm x 11.4 mm x \_\_\_\_\_ mm.

**Q.3** Explain the any five out of the following six: **(10)**

1. English bond.
2. Flemish bond.
3. Define: Header, Stretcher, Quoin, Closer
4. Sketch any four types of Bamboo cuts for Bamboo Construction.
5. Explain Adobe technique in mud construction.
6. Explain Flint Rubble masonry.

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

- 1) Define Arch. Sketch any four types of arches.
- 2) Explain different methods of Mud Construction with Sketches.
- 3) What are the advantages and disadvantages of bamboo as a building material?