

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ARCHITECTURE & PLANNING
B. Arch. / B. ID Winter 2018-19 Examination

Semester: 1

Date: 22/12/2018

Subject Code: 01101102

Time: 10:00 am to 1:00 pm

Subject Name: Building Material and Construction Technology - I

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 Explain in brief: what do you understand by brick bonds? **(10)**
Draw or Sketch the elevation, plan (odd & even courses) and isometric view of 1&1/2 brick thick English Bond.

Q.2 **Answer briefly** (any 5) **(20)**

a. Fill in the blanks:

- i. _____ is the operation of filling mortar joints with mortar to new or old brickwork.
- ii. _____ is the highest wedge-shaped piece in a masonry arch.
- iii. In _____ masonry, stones are either undressed or roughly dressed.
- iv. A mixture of cement, sand and water used in a masonry that acts as a bonding agent is called _____.

b. Differentiate the following with necessary sketches

- i. Brick Masonry vs Stone Masonry.
- ii. Header bond vs. Stretcher bond

c. . Define the terms:

- i) Lintel ii) Stretcher iii) Brick bond iv) Keystone

d. Sketch the following:

- i)) Wattle and Daub ii) Bullnose brick iii) Beveled Closer iv) Two ear bamboo cut

e. Explain the following:

- i) Hand Wash test ii) Cigar test

f. Write a short note on the composition of a good Brick Earth.

Q.3 **Answer the following in brief: (Any 5)** **(10)**

- a. Define: Header, Stretcher, Quoin, Closer
- b. Enlist types of Rubble masonry.
- c. Write short note on classification of bricks.
- d. Sketch any four types of Bamboo cuts for Bamboo Construction.
- e. Explain Adobe technique in mud construction.
- f. Explain Rammed Earth technique in mud construction.

Q.4 **Explain the following (Any 2)** **(10)**

- a. What is Ashlar masonry? Enlist and Explain different types of Ashlar masonry with sketches.
- b. Write a note on uses of bamboo in foundation, walls and as a roofing material.
- c. Enlist and explain the classification of rocks and list the types of stones.