

PARUL UNIVERSITY
FACULTY OF ARCHITECTURE
B.Arch/ B.ID Summer 2018-19 Examination

Semester:1**Date:22/04/2019****Subject Code: 01101102****Time: 02:00 am to 05:00 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 1½ brick thick English Bond.
- Q.2** Answer briefly (any 5) **(20)**
a. Fill in the blanks:
i. Very fine form of sand in which you cannot see individual grains is known as _____.
ii. The Traditional brick size is _____mm x 11.4 mm x _____mm.
iii. A horizontal structural member that supports the load over an opening such as door or window is called _____.
iv. In _____ masonry, stones are either undressed or roughly dressed.
- b. Differentiate the following with necessary sketches**
i. Sympodial Bamboo vs. Monopodial Bamboo
ii. Header bond vs. Stretcher bond
- c. Define the terms:**
i) Keystone **ii)** Mortar **iii)** Course **iv)** Igneous rocks
- d. Sketch the following:**
i) Wattle and Daub **ii)** Quarter Queen Closer **iii)** Bevelled Closer **iv)** Mitred Closer
- e. Explain the following:**
i) Cob construction **ii)** Rammed Earth technique
- f. Write a short note on the composition of good Brick Earth.**
- Q.3** Answer the following in brief: (Any 5) **(10)**
a. Sketch any four types of Bamboo cuts for Bamboo Construction.
b. Enlist types of Rubble masonry and Ashlar masonry.
c. Explain Biscuit test and Hand wash test for mud construction.
d. Define: Header, Stretcher, Quoin, Closer
e. Explain Adobe technique in mud construction.
f. Explain Flint Rubble masonry.
- Q.4** Explain the following (Any 2) **(10)**
a. Enlist and explain the classification of rocks and list the types of stones.
b. Define Arch. Sketch any four types of arches.
c. What is Quarrying of Stones? Explain different methods of Quarrying.