

GUJARAT TECHNOLOGICAL UNIVERSITY**B.ARCH. - SEMESTER-I EXAMINATION – WINTER 2015****Subject Code: 1015003****Date:18/12/2015****Subject Name: Building Construction-I****Time: 10:30am to 01:30pm****Total Marks: 40****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Enlist basic building materials used in the construction of buildings. Explain significance of the study of building materials in architecture. **04**
- (b) Draw a typical wall section of a building with RCC framed structure showing all building elements. **04**
- Q.2** Enlist various 'Mud construction techniques' and explain any two. **08**
- Q.3** (a) Write a short note on: **04**
1. Sawing of timber
 2. Seasoning of timber
- (b) Write a short note on: **04**
1. Manufacturing of bricks
 2. Composition of good brick earth
- OR**
- Q.3** (a) Sketch the following: **04**
1. Micro-structure of a tree
 2. Rat trap bond
 3. Herring bone bond
 4. English bond
- (b) Sketch the following: **04**
1. Random Rubble uncoursed stone masonry
 2. Random Rubble coursed stone masonry
 3. Dressed stone coursed masonry
 4. Dressed stone uncoursed masonry
- Q.4** Explain through sketches: Stages of Bamboo construction **08**
- OR**
- Q.4** Give comparison of: **08**
1. Load bearing and Framed Structure
 2. Brick masonry and Stone masonry
- Q.5** (a) Answer the following: **04**
1. Sketch any two lengthening and widening joints
 2. Give classification of Rocks
- (b) Sketch the following: ½ Brick bat and Double Bullnose Brick. **04**
- OR**
- Q.5** (a) Draw or draft to Scale-1:10 - Isometric view of a right angled corner junction of one and half brick wall in Double Flemish Bond. Show min. 6 courses and Indicate all terms. **04**
- (b) Draw or draft to Scale-1:10 - Elevation and section of 350 MM tk. Square Rubble Uncoursed Masonry. Size of the wall panel in elevation- Height:1500 MM and Width: 1000 MM **04**