



**JBE-161001010102** Seat No. \_\_\_\_\_

**B. Architecture (Sem. I) (CBCS) Examination**

**December - 2019**

**Building Material & Construction - I**

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) Question One and Two are compulsory. Attempt any Three out of the remaining Five questions.  
(2) Draw neat sketches with labeling wherever it is necessary.

**1** From the elements of building listed below choose **10**  
Any **Five** and write down the function of this element and show the location of the element in the building :

- (1) Lintel
- (2) Raft foundation
- (3) Corbelling
- (4) Cornice
- (5) Drip mould
- (6) Sill
- (7) Gable Wall
- (8) Coping
- (9) Ramp

**2** For the given element, while choosing the material **10**  
for making of the element, we keep in mind several criteria regarding the properties of the material. From the list given below of different elements choose any **Five** and write which material you shall select for making and give the reasons for the selection :

- (1) Tread of the Step in Public building
- (2) Tent
- (3) Partition of the Sound Recording Studio

- (4) Damp-proof course in the Plinth
  - (5) Truss of Vegetable Market in Rajkot
  - (6) Floor of Industrial building
  - (7) Beam and column of high rise building
  - (8) Casing for the glass when fixed in the window
  - (9) Reinforcement! n the RCC Slab
- 3** Sketch the typical plan and Side Elevation of the Staircase and identify all the elements of the Staircase. **10**
  - 4** Sketch the isometric of two intersecting Sloping roof and identify all the terms associated with the roof. **10**
  - 5** Sketch the elevation of the opening with door and its frame and identify all the terms associated with it. **10**
  - 6** Differentiate between : (Any Five) **10**
    - (1) Strip Footing and Isolated Footing
    - (2) Lintel and Beam
    - (3) Folded Plate Staircase and Waist Slab Staircase
    - (4) Vault and Dome
    - (5) Mullion and Transom
    - (6) Pivoted Window and Louvered Window
    - (7) Half turn Staircase and Spiral staircase
    - (8) Queen post truss and King post truss
    - (9) Load bearing Structure and Frame Structure
    - (10) Tensile stress and compressive stress
  - 7** With the help of Stress-Strain diagram, show brittle material like glass, elastic material like rubber, ductile material like steel, tough material like leather. **10**