



MAZ-10765

Seat No. _____

B. Arch. (Sem. IX) Examination
November / December – 2016
Building Materials & Construction – VIII

Time : 4 Hours]

[Total Marks : 80

- Instructions :**
- (1) Contextual understanding will be considered critically in assessment.
 - (2) Support your statement with necessary examples and sketches wherever necessary.
 - (3) Each question carries equal weightage of marks.

PART - II : Construction

1 Give detailed articulation for any one of the following condition with neat sketches and give rationale behind. Assume and specify necessary information, if not specified.

(A) Articulate a joint between a space frame and RCC Cantilever Beam and Column.

Consider 30 mt as span of space frame to cover an atrium of a shopping mall at 12th floor.

Consider Install sequence in your explanation.
Give detail of node of the space frame.

(B) Articulate joints in Tensile Fabric Architecture
Metal to Fabric

Metal to Metal

Fabric to Fabric

Metal to Foundation

Attempt any 2 questions out of 3 questions.

20 Marks each

- 2 Explain Tensigrity as a structural system with its principles, explore the potential of application of system in practical consideration.

- 3 Draw any four details with sketches and mention technical terms.
 - (A) Structural node connecting six members in a space frame.
 - (B) Roof purlins and corrugated sheet in flat and singly curved planes.
 - (C) Lengthing of structural tensile cable
 - (D) Lengthing of paper tube as a structural element.
 - (E) Concrete foundation to support cable stay structure.

- 4 Design a structural system of a canopy for a restaurant on highway of Bhuj city of Kachchh with size of canopy as 25mt x 50mt x 5mt high. It is required 'to build this structure with Bamboo or Plastic Plumbing pipes. Respond with neat sketches and rationale behind your choices. Assume necessary information if not specified and clearly mention it in your answer sheet.
