

**MANIPAL UNIVERSITY****FIFTH SEMESTER B. ARCH. DEGREE EXAMINATION – NOVEMBER 2015****SUBJECT: ARC 303 - BUILDING CONSTRUCTION AND MATERIALS V/ BUILDING CONSTRUCTION V  
(2010 & 2007 SCHEME)**

Tuesday, November 17, 2015

Time: 10:00 – 14:00 Hrs.

Max. Marks: 50

☒ Answer any **THREE** from **PART A** and any **ONE** from **PART B**.

☒ Illustrate your answers with neat proportionate sketches.

**PART – A**

1. A glazed window of aluminium sections to be fitted in an opening of 1.2m × 1.3m and the wall thickness of 230 mm including plaster. Design and draw the following:

1A. Plan 1:10

1B. Section 1:10

1C. Elevation 1:10

1D. Any one fixing detail 1:5

(3+3+3½+3 = 12½ marks)

2. **Explain with sketches:**

2A. Partial elevation of Angular steel truss showing all the details

2B. Partial elevation of Tubular steel truss showing all the details

2C. PVC doors

(6+3½+3 = 12½ marks)

3. **Draw and explain the following:**

3A. Square pyramid space frame

3B. Braced barrel vaults

(6+6½ = 12½ marks)

4A. Discuss the design considerations for the provision of passenger lifts in a building.

4B. Explain with the help of proportionate sketches the Plumbing layout of a toilet measuring 2m×3m showing the fixtures and important connections.

(6½+6 = 12½ marks)

## PART – B

- 5A. Explain the term thermal insulation.  
5B. Discuss with sketches the various types of thermal insulating material for wall and ceiling.  
(3+9½ = 12½ marks)

6. **Explain with the help of sketches:**

- 6A. Methods of damp prevention in foundations  
6B. Sound insulation of floors  
6C. Sound insulation of ceiling

(4+4+4½ = 12½ marks)

