Reg. No.										

MANIPAL UNIVERSITY

FOURTH SEMESTER B. ARCH. DEGREE EXAMINATION – APRIL/MAY 2014

SUBJECT: (ARC-204) **BUILDING CONSTRUCTION AND MATERIALS IV (2010 SCHEME)**
BUILDING CONSTRUCTION IV (2007/2003 SCHEME)

Tuesday, May 06, 2014

Time: 10:00-14:00 Hrs. Max. Marks: 50

- **Answer any THREE questions from PART – A and any ONE from PART – B**
- **Assume suitable data wherever necessary.**

PART – A

1. **Sketch a neat diagram of a rolling shutter showing the following components:**

1A. Hood cover and curtain

1B. Lock plate and pulling hook

1C. Guide channel and Stopper

1D. Holdfast and sliding lock

1E. Handle and square bar

(2½ marks×5 = 12½ marks)

2. **Sketch the following details for a roof slab of size 8m×6m.**

2A. Mention the type of slab

2B. Plan

2C. One Section

2D. Isometric view

(1½+4+3+4 = 12½ marks)

3. For a cantilever staircase of width 1.25m and for floor height of 3.15m, sketch the following details:

3A. Plan

3B. Sectional elevation

3C. Fixing of railing

(5+5+2½ = 12½ marks)

4A. Mention the factors affecting the performance of the beam.

4B. Elaborate with sketches the failure in RCC beam.

4C. Mention the different types of RCC beams. Explain the reinforcement details with sketches.

(2+4½+6 = 12½ marks)

PART – B

5A. **Write short notes on any FOUR of the following:**

i) Distemper

ii) Cement Paint

iii) Plastic Bitumen

iv) PVC

v) Polymerization

5B. Explain any four uses of plastics in building construction.

((2 marks×4)+4½ = 12½ marks)

6. Compare the properties and uses of Plain Cement Concrete and Reinforced Cement Concrete.

(12½ marks)