

MANIPAL UNIVERSITY**THIRD SEMESTER B. DES. (ID) DEGREE EXAMINATION – NOVEMBER 2017****SUBJECT: BID 203 – BUILDING CONSTRUCTION AND MATERIALS – III**

Tuesday, November 07, 2017

Time: 10:00 – 14:00 Hrs.

Max. Marks: 50

- ✍ **Question Number 1, 2 and 5 are compulsory.**
- ✍ **Attempt any ONE out of Question Number 3 and 4.**
- ✍ **Support your answers with neat sketches.**

1. Design and draft the layout of an open well RCC stair for a residential building. The inside dimensions of the staircase space are 2.00m x 4.6m. The floor to floor height is 3.30m and the RCC slab is of 120mm thickness. Draft the following drawings @1:20 scale:

- 1A. Plan
- 1B. Section
- 1C. Fixing details of handrail to wall/ tread
- 1D. Calculations for height of riser, tread, going etc

(5+6+5+4 = 20 marks)

2. **Differentiate between any FIVE of the following:**

- 2A. Framed and load bearing structure
- 2B. Ceramic tile & Vitrified tile
- 2C. Binders and Girders
- 2D. Scotia and nosing
- 2E. Tightly Fixed and Suspended Ceilings
- 2F. Tread and Riser

(2 marks × 5 = 10 marks)

3. Write a short note on thermosetting polymers, along with their use in interiors.

(5 marks)

4. Draw a sketch of timber floor for ground/basement floor.

(5 marks)

5. List any five commonly used flooring materials along with brief description of their properties.

(3 marks × 5 = 15 marks)

