

MANIPAL UNIVERSITY**THIRD SEMESTER B. A. (ID) DEGREE EXAMINATION – FEBRUARY 2016****SUBJECT: BID 211 – BUILDING SERVICES - I**
(2013 AND 2014 SCHEME)

Wednesday, February 24, 2016

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Question No. 1 is compulsory.**

✍ **Answer any FOUR questions from Question No: 02 – 06.**

1. Draw a typical arrangement of waste water distribution from a toilet with sketches in a single storey residential building. Explain the function of Floor trap, Gulley trap and Manhole in the system.

(10 marks)

- 2A. What are the general considerations to be observed while designing a pipe for water distribution system in a Multi-storey building?

- 2B. Explain the various water distribution system in a Multi-storey Building.

(2+8 = 10 marks)

- 3A. Define Rain water harvesting.

- 3B. Explain in detail with sketches, artificial ground water recharge and roof top rain water harvesting.

(2+8 = 10 marks)

- 4A. Define plumbing.

- 4B. Explain on the various systems adopted in Plumbing of drainage work in a building.

(2+8 = 10 marks)

5. **Write a short note on:**

- 5A. Compressor

- 5B. Air Handling Unit

- 5C. Cooling Tower

(5+2½+2½ = 10 marks)

6. **Explain on the following:**

- 6A. Fire Triangle

- 6B. Principle mechanism of fire spread

- 6C. Classification of fire

- 6D. Fire Wall

(2½ marks × 4 = 10 marks)

