

**MANIPAL UNIVERSITY****THIRD SEMESTER B. DES. (ID) DEGREE EXAMINATION – NOVEMBER 2017****SUBJECT: BID 211 – BUILDING SERVICES - I**

Saturday, November 11, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

- ✍ **Answer any FIVE questions.**
- ✍ **Support the answers with sketches wherever necessary.**

**1. What do you mean by:**

- 1A. Aquifers
- 1B. Soak pit
- 1C. Ton in Refrigeration
- 1D. Bacteriological Analysis
- 1E. Air handling unit

(2 marks × 5 = 10 marks)

**2. Distinguish between any TWO of the following:**

- 2A. Circular system and Radial system of water supply
- 2B. Sluice valve and Scour valve
- 2C. Upfeed and Downfeed system

(5 marks × 2 = 10 marks)

**3A. What are the two systems of water supply?**

- 3B. What are the various factors which are mainly responsible for losses and wastes in the water distribution system?**

(4+6 = 10 marks)

**4. Explain on the following:**

- 4A. Classification of fire
- 4B. Fire triangle
- 4C. Air Conditioning
- 4D. Wet riser and Dry riser hydrant systems

(2½ marks × 4 = 10 marks)

**5. Explain any five types of sanitary fittings (sketches and dimensions in metres).**

(2 marks × 5 = 10 marks)

**6. Explain the various systems of Plumbing with suitable diagrams.**

(2½ marks × 4 = 10 marks)

