

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND/THIRD SEMESTER B. ARCH. DEGREE EXAMINATION – APRIL 2018

SUBJECT: BUILDING SERVICES I (ARC-14-108/ARC 211)
(2014/2010 SCHEME)

Monday, April 16, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

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

1A. Explain the meaning of the term house drainage and mention its general principles.

1B. **Write short notes on:**

- i) Bath tubs ii) Sinks iii) Urinals

(4+(2 marks × 3) = 10 marks)

2A. Define plumbing. Explain two types of water supply feeding systems for buildings.

2B. Explain in detail features and details of underground and overhead water storage tanks.

(5+5 = 10 marks)

3A. What are the basic principles of drainage system for a residential plot?

3B. What are traps? Mention different types of traps with sketches.

(5+5 = 10 marks)

4. **Write short notes on:**

4A. Centrifugal pumps

4B. Air lift pumps

4C. Displacement pumps

4D. Jet pumps

4E. Hydraulic ram pumps

(2 marks × 5 = 10 marks)

5A. What are surface drains? What are their advantages and disadvantages?

5B. What are the different shapes of surface drainage? Explain with neat sketches.

(5+5 = 10 marks)

6A. What are the various points that you will keep in view while selecting the positing of a septic tank or a leach pit in a typical residential site? Explain with a site plan.

6B. What is leach pit? Explain the working of a leach pit with a neat diagram.

(5+5 = 10 marks)

