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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B. DES. (ID) DEGREE EXAMINATION – DEC 2019/JAN 2020

SUBJECT: BID 211 – BUILDING SERVICES – I
(2015 SCHEME)

Tuesday, January 07, 2020

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

- ✂ Question Number 1 is compulsory.
- ✂ Attempt any FOUR out of Question Numbers 2, 3, 4, 5 and 6.
- ✂ Support your answers with neat sketches wherever required.

1. Explain the Sanitation system and Plumbing Network for a Residential toilet layout with the help of neat sketches. Assume suitable data wherever required.

The toilet layout should represent in plan and section with the following components and support with a legend:

- i) Waste water Pipe and Floor traps
- ii) Soil- waste pipe
- iii) Vent pipe
- iv) Legend to show Plumbing pipes and traps
- v) Sanitary fittings with appropriate dimensions and specifications.

(2 marks × 5 = 10 marks)

2A. Enlist and Explain any four types of pumps used in Water Supply systems.

2B. Briefly describe the three physical Tests for the Quantitative Analysis of water.

(4+6 = 10 marks)

3A. What are the two types of Sanitation methods?

3B. Explain the following with the help of neat sketches.

- i) Manhole ii) Grease Traps iii) Septic Tank

(4+(2 marks × 3) = 10 marks)

4. What are the three types of Air Distribution System?

(10 marks)

5. Write Short notes:

5A. Diffusers

5B. Registers

5C. Dampers

5D. Grilles

(2½ marks × 4 = 10 marks)

6. Explain the classification of fires. Write short notes on wet riser and dry riser.

(2+4+4 = 10 marks)

