

BACHELOR OF ARCHITECTURE THIRD YEAR FIRST SEMESTER - 2025

SERVICES & EQUIPMENTS-I

Time: 3:00 Hrs.

Full Marks: 100

Answer any Four

1. Describe the various processes followed in a water treatment plant to treat raw water before supplying to household. Use diagram, sketches as required. 25
 2. Write short notes on - (any five) (Use appropriate sketches)
i. Centrifugal pump, ii. Travel Distance, iii. Refuge area, iv. Grease trap, v. Sprinkler, vi. Rainwater Recharge Pit, vii. Water quality, viii. Fire tower, ix. Intercepting trap 5x5=25
 3. Why lift / elevator used in a building? What are the differences between elevator & escalator? What are the parameters to be considered before selecting an elevator for high rise building? Write the name of 4 nos. of elevator manufacturing companies. Draw typical plan/s, section/s neatly showing all important components of an elevator with machine room. 2+5+6+2+10=25
 4. Mention the names of different materials that are used for making the water supply pipes. Draw and name the different types of joints/fittings used in water supply piping connections. Draw a 'P-trap' and a 'S-trap' used in drainage connections. Describe the role of water seal associated with traps. Draw a sectional sketch showing different important components of water supply system in a small double storied residential building. 4+6+(3+2) +10=25
 5. Why Septic Tank is necessary? Is it possible to complete a residential project without septic tank? Explain with important points. Show different important features of a standard underground septic tank and soak pit with the help of schematic drawings (plans & sections). Write 4 important points for which septic tank constructed as underground structure generally. 2+4+15+4=25
 6. What do you mean by valve? What are the various functions of valve? With the help of appropriate sketches, describe the advantages & disadvantages of 'Single Stack' & 'Double Stack' in drainage system. Propose external vertical & underground drainage lines (for Soil waste, waste water, rainwater) for a G+3 storied residential building with two nos. 2-BHK tenements at each floor and stilt parking along with inspection pit, direction of slope and other important aspects of sewerage system. Proposal to be shown with appropriate sketches (plans, sections). 2+4+4+15=25
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