

## LESSON PLAN

**NAME OF THE FACULTY** : Ar. Twinkle Aggarwal  
**DISCIPLINE** : ARCHITECTURAL ASSISTANTSHIP  
**SEMESTER** : 3rd  
**SUBJECT** : BUILDING SERVICES

**LESSON PLAN DURATION** : 15 WEEKS  
**WORK LOAD PER WEEK** : 03 (L)

<b>THEORY</b>	
<b>Week</b>	<b>Topic</b>
<b>1<sup>ST</sup></b>	Water Supply - Water as a natural resource, public health significance of water quality, demand of water for domestic, commercial, industrial and public utility purposes as per BIS standards. Per capita demand, leakage and wastage of water and its preventive measures,
<b>2<sup>ND</sup></b>	System of water supply – continuous, intermittent, their advantages and disadvantages, Storage and Distribution of Water: Different methods of water distribution boosting water, gravity and pressure distribution by storage tanks of individual buildings, Hot water supply for buildings including solar water heating, Service connections, types and sizes of pipes, water supply fixture and installations, Concept of Rain water harvesting.
<b>3<sup>RD</sup></b>	Drainage - Principles of drainage, surface drainage; combined and separate system of drainage, shape and sizes of drains and sewers, storm water over flow chambers, methods of laying and construction of sewers, House drainage: traps – shapes, sizes, types, materials and function, Inspection chambers – sizes, and construction
<b>4<sup>TH</sup></b>	Ventilation of house drainage – anti-siphonage and vent pipes, single stack and double stack system, Functions and working of sinks, wash basins, water closets, flushing cisterns, urinals, – sizes and types, Septic tanks, seepage and soak pits
<b>5<sup>TH</sup></b>	Simple exercises on layout plans for toilet and kitchens for public and residential buildings including the placement, distances and fixing details
<b>6<sup>TH</sup></b>	<b>SESSIONAL TEST-I</b>
<b>7<sup>TH</sup></b>	Lighting and Electrical Fittings - Electrical distribution-conduits for wiring, types of wiring, types of switches, various terms used in lighting-illumination, Lux, lumen etc. distribution panels,
<b>8<sup>TH</sup></b>	MCB'S, ELCBS, Methods of lighting, quality of light of mercury lamps, incandescent types of lamps, fluorescent tubes, CFL and other lamps, thumb rules for calculation of illuminating level, various systems of wiring and their sustainability, Symbolic representation of electrical fittings for different work areas in residential building (e.g. bed room, living room, kitchen, study and toilet)
<b>9<sup>TH</sup></b>	Preparation of electrical layout of a simple residential building, Precautions to avoid electrical accidents
<b>10<sup>TH</sup></b>	<b>SESSIONAL TEST -II</b>
<b>11<sup>TH</sup></b>	Heat, Ventilation and Air Conditioning (HVAC) - Behavior of heat propagation, thermal insulating materials and their co-efficient of thermal conductivity, General methods of thermal insulation. Thermal insulation of roofs, exposed walls, Ventilation: Definition and necessity, System of ventilation (Mechanical)

12 <sup>TH</sup>	Principles of air conditioning, Air cooling, Different types of Air conditioning systems and their use in buildings, Essentials of air-conditioning system, Fire Fighting Services - Causes of fire in Buildings, classification of building materials according to fire rating; fire alarm systems
13 <sup>TH</sup>	Introduction to fire-fighting system, precaution and controlling devices (fire panels, door and windows automation, fire hydrants and sprinklers), Fire escape elements (staircases, ramps,), provisions in building from fire safety angle as per BIS; heat detectors, and fire detection system
14 <sup>TH</sup>	Vertical Transportation Systems - Classification and types of lifts, lift sizes, provision and installation, escalators, sizes, safety norms to be adopted
15 <sup>TH</sup>	<b>SESSIONAL TEST-III</b>