

4530 - BUILDING SERVICES - I										
Teaching Schedule Per Week			Progressive Assessment		Examination Schedule (Marks)					
Lectures	Practical	Credit			Theory		Practical Ex.		Total	
2	1	3	25	25	3 Hrs	100	--	--	150	
Pre-requisite		Source	Semester		Theory	Test	Total	TW	PR	Gr Total
Nil		ARC			75	25	100	--	--	100

**RATIONALE:** This curriculum aims at imparting to the students theoretical as well as practical knowledge of the various basic services involved in the building industry viz. water supply, sanitation & electrification.

#### COURSE CONTENTS

	Hrs	Mks
<b>1. WATER SUPPLY</b>	15	32
House Water supply, Sources of water supply, Catchment areas, reservoirs and their locations, Overhead water storage tanks and tank covers, Pipes and fittings, materials, size and classification stopcocks, bib caps, push taps, overflow pipes Connection of taps to sanitary fittings, Inspection and maintenance, site visits, Local bylaws and Indian Standards: Layout of Water supply to be prepared on the given building plan in addition to other details.		
<b>2. DRAINAGE</b>	21	36
Introduction to sanitation, its importance and basic approach, Sanitary Layout from drainage point of view, Consideration of location of sanitary units in a house or building at the planning stage, Drainage system for a house. Sewers - 1 Materials 2 Workmanship 3 Details of Construction, Gradients, Local byelaws and Public Health requirements. Waste water drainage. Storm water drainage: Materials Water entrances, Gradients, Local bye-laws and Public Health Requirements, 5 Maintenance, Rain water disposal and roof drain, Fittings: Planning and Layout of sanitary fittings of. Surgeons Lavatory basins. Bidet Connection to waste pipes and vents water closets. Urinals		
<b>3. ELECTRICAL SERVICES</b>	12	32
Electrical fittings & fixtures, Methods of electrification viz. open wiring, conduit wiring, concealed wiring, Electrical layout of buildings with symbolic denotations		
<b>Total</b>	<b>32</b>	<b>100</b>

#### TERM WORK:-

The term work shall be based on the above syllabus & shall consist of the following.

- 1 sheet on valves & fittings used for water supply.
- 1 sheet on water distribution layout of single storeyed/ multistoreyed residential block.
- 1 sheet on sanitary fittings & fixtures.
- 1 sheet on (a) Storm water drainage layout of a building & the surrounding site (b) Drainage layout of sanitary sewage of the building with septic tank & soakpit details.
- 1 sheet on details of internal plumbing layout of a toilet showing all required sanitary fixtures.
- 1 sheet on electrical layout of a building uses the necessary symbolic denotations.

#### METHOD OF TEACHING:

Appropriate site visits shall be conducted for a practical understanding of pipe laying, wiring and various sanitary and electrical fixtures.

#### REFERENCE BOOKS: -

- 1) Water supply & Sanitary Engineering Vol. I & II Gurucharan Singh.
- 2) Water supply & Sanitary Engineering Rangwala.
- 3) Water supply & Sanitary Engineering G. S. Birdie. J. S. Birdie
- 4) Plumbing F. Hall.
- 5) Water supply and sanitary Engineering S.K. Hussain.
- 6) Basic Electrical Engineering Dhogal.
- 7) Electrical wiring Estimating & Costing B.D.Arora.