

5007 -CONSTRUCTION (ADVANCED) - III										
Teaching Schedule Per Week			Progressive Assessment	Examination Schedule (Marks)						
Lectures	Practical	Credits		Theory			Practical Ex.		Total	
3	1	4	25	3Hrs.	100		0		125	
Pre-requisite		Source	Semester	Theory	Test	Total	TW	PR	Gr Total	
4009		CVL		75	25	100	-	-	100	

RATIONALE: -The course content is designed to give various aspects of modern and advanced methods of construction of Civil Engineering

COURSE CONTENTS	Hrs	Mks
1. DEEP TRENCH EXCAVATIONS Introduction, basement excavations -perimeter trench methods, raking, struts, cofferdams, diaphragm walls.	3	6
2. TALL CHIMNEYS, SILOS, ETC. General aspects of construction. Form-work -Slip-forms, jump-forms. Lining.	5	10
3. BRIDGE CONSTRUCTION TECHNIQUES Introduction. Construction techniques-Fully supported on staging, partly supported on staging. Cantilever construction. Arch rib constructed with cable supports. Continuous deck construction with movable forms. Incremental push launching method. Form-work and false-work.	5	12
4. SPECIAL CONCRETING OPERATIONS Introduction. Short-crete, pump-crete, grouting, guniting, tremie concreting, mass concreting.	5	10
5. BOREWELL CONSTRUCTION Introduction. Ground water survey. Methods of detecting ground water table, Electrical resistance method. Yield of wells. Methods of drilling, insertion of casing.	6	12
6. CLADDINGS Definition. Functions. Requirements. In- fill panels. Types of claddings -Asbestos cement sheet wall cladding. Sheet metal wall cladding. Brick and block walling. Jointing- Mastics and sealant, types and requirements.	5	10
7. FACTORY BUILDINGS Introduction. Roofs- North light roofs, Monitor roofs, Special type of steel roofs, Lattice truss, Portal frame, Shell roof.	5	10
8. PRE-FABRICATED CONSTRUCTION Introduction. Advantages. Areas of application. Various pre-fabricated units. Constructional details	4	8
9. REINFORCED EARTH CONSTRUCTION Introduction. Advantages. Reinforcing materials, characteristics. Application areas. Constructional-details.	6	12
10. DEMOLITION OF STRUCTURE Introduction. Safety precautions. Demolition-techniques -Hand demolition, push arm demolition, deliberate collapse demolition, demolition ball techniques, wire rope pulling demolition, demolition by explosives, other methods.	4	10
Total	48	100

REFERENCE BOOKS

1. Construction Technology (vol. 1 to 4) by Chudley
2. Construction of Buildings (vol.1 to 4) by R. Barry.