

5005 - CONSTRUCTION EQUIPMENT										
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
Nil		CVT								

RATIONALE: - Due to increase in the magnitude and complexity of construction use of equipment has become imperative. It is necessary that Civil Engineers working on the construction project and acquired with broad construction features and working principles of various construction equipment so that he can ensure its effective use.

COURSE CONTENTS	Hrs.	Mks
1. COMPRESSED AIR	04	08
Use of compressed air-different types of air compressors such as reciprocating, rotary, screw and centrifugal, broad idea about their construction and working principles, study of various pneumatic tools hand held drills, pavement breakers, rotary blast hole drill, jack hammer, wagon drill.		
2. STONE CRUSHING EQUIPMENT	04	08
Types of crushers (primary, secondary, tertiary), jaw crushers, gyrator, hammer mill cone, screens for crushing stone, their types and working principles.		
3. CONCRETING EQUIPMENTS	05	10
Concrete mixing equipment - Types of mixers viz- tilting drum, non-tilting drum, pan- mixers, agitators, their constructional features and working principles. Compaction of concrete, methods of compacting, internal and external vibrators, surface vibrators, vibrating tables.		
4. PUMPING EQUIPMENT	05	08
Classification of pumps, reciprocating pumps, centrifugal pumps, diaphragm pumps, submerged pumps, selection of pumps, well point system.		
5. GROUTING EQUIPMENT	02	06
Equipment used for grouting, schematic layout of grouting equipment.		
6. PILE AND PILE-DRIVING EQUIPMENT	06	10
Piles classification, types of piles- timber piles, pre-cast piles, concrete piles. Advantages and disadvantages of cast, in place concrete piles, steel piles, pile hammers.		
7. EARTH MOVING EQUIPMENTS	4	10
Resolving shovels, basic shovels, various attachments and their uses. Hoe, Drag-lines and clamshell, hydraulic shovels, comparison between cable operated and hydraulically operated shovels. Selection of shovels for various situations.		