

GOVERNMENT POLYTECHNIC, VAISHALI

LECTURE PLAN FOR LEFT SYLLABUS EFFECTIVE FROM 10-04-020

BRANCH: - CIVIL ENGINEERING

SEMESTER: - VI

SUBJECT: - ADVANCED CONSTRUCTION TECHNIQUES & EQUIPMENT (1615605A)

SUBJECT TEACHER: - KUMARI SMIRTI

SL.NO.	UNIT	TOPIC TO BE COVERED	NO.OF PERIOD	BOOK
2.	Unit-04	Hoisting and Conveying Equipments 4.1 Hoisting Equipments Principle and working of Tower cranes, Crawler cranes, Truck mounted cranes, gantry cranes, Mast cranes, Derricks. 4.2 Conveying Equipments Working of belt conveyors. Types of belts and conveying mechanism. Capacity and use of dumpers, tractors and trucks.	L1 - L2	SELF WRITTEN NOTES , T1, T2
3	Unit-05	Earth Moving machinery 5.1 Excavation Equipments Use, Working and output of bulldozers, scrapers, graders, and power shovels, JCB, draglines. 5.2 Compacting Equipments Use of rollers, Roller types- Plain rollers , Sheep footed rollers, Vibratory rollers, pneumatic rollers. Rammers- use and working.	L3 – L6	SELF WRITTEN NOTES , T1, T2
4	Unit-06&07	6.1 Concreting Equipments 6.2 Concrete Mixers Types of concrete mixers. Weigh batching equipments, Equipments for transportation of concrete- trolleys, lifts. Transit mixers, Concrete vibrator-Needle vibrators, Screed vibrators. Automatic concrete plants – layout, process and working. 6.3 Stone Crushers Types of stone crushers, capacities and working. Equipments for production of artificial sand. 7.1 Miscellaneous Equipments and Equipment management 7.2 Miscellaneous Equipments Pile driving equipment, Pile hammers, selection of hammers. Working of hot mix bitumen plant, Bitumen paver. Grouting equipments, Floor polishing machine. 7.3 Equipment Management Standard equipment, Special equipment, Selection of equipment, Owning and operating cost of construction equipment. Economic life of construction equipment. Preventive maintenance of equipment, Break down maintenance of equipments.	L7-L14	SELF WRITTEN NOTES , T1,T2

Text / Reference Books:

Titles of the Book	Name of Authors	Name of the Publisher
Concrete Technology(Third Edition)	M. L. Gambhir	Tata McGraw Hill
Materials of construction	R. C. Smith	McGraw-Hill Co. Ltd.
Construction Planning and Equipment	R. Satyanarayana and S. C.Saxena	Standard Publication New Delhi
Practical Civil Engineering Handbook(T1)	Khanna publication	Khanna Publication
Advanced Construction Techniques and Equipments(T2)	R.K. Yadav	Foundation Publishing

Construction Materials

D.N. Ghose

Tata McGraw-Hill