

Teaching Scheme:

Name of Subject	Sub Code	Theory Hours per week	Tutorial Hours per week	Practical Session Hours per week	Total Hours	Total Subject Credits	Department teaching the subject
Resource Management	CP510113	3	2	0	5	4	Civil Engineering

Examination Scheme:

Name of Subject	Sub Code	Continuous Internal Assessment (CIE)		External Component	Total Marks
		MSE	Internal Evaluation	ESE	
Resource Management	CP510113	30	10	60	100
Marks Required to clear		20		30	50

If the student doesn't clear as per above criteria, Table below applies

A	B	C	D	NOTE
Internal Evaluation marks will be declared prior to three weeks to term end.	A Remedial Exam (out of 40 marks) has to be given by the student and has to score 20 marks out of 40 to clear the CIE Component.	If students fails to score 20 out of 40 in the remedial exam, he/she has to appear for Remedial Exam (out of 40) in the <u>Next Sem.</u>	He/she can appear for External component, but again has to score 30 out of 60 to clear. If not - Next Sem.	In order to clear the subject as a whole, a student is required to clear both (CIE as well as External component).

Topic Details	Hours
Material Management: 27 Hours	
UNIT – 1: (13 Hours)	
1. Introduction to Material Management: Function and objectives of material management; Management of material resources; Brief about integrated material management. Procurement: Purchase cycle and its principles; Purchasing system and procedures; Vendor analysis; Legal aspects of purchasing	07
2. Inventory management: Importance of inventory management; Cost concept of inventory; Inventory models.	06
UNIT – 2: (14 Hours)	
3. Inventory management: Selective inventory model and tools: ABC Analysis; Just in time; Value engineering; HML, VED FSN, WIP.	07
4. Classification, Codification, and Store management: Necessity for the classification and codification; Types of classification and codification, Store and Store keeping.	07

Equipment Management: 27 Hours		
UNIT – 3: (13 Hours)		
1. Selection of Construction Equipment: Introduction; Classification of equipment's; Standard types of equipments; Special equipment; Financial aspects of equipment; Owning and operating costs; Depreciation costs; Economic life of construction equipment.		07
2. Equipment management engineering fundamental: General information; Soil fundamental; Rolling resistance; Effect of grade on required tractive effort; Coefficient of traction; Drawbar pull; Rimpull; Effect of altitude; Temperature and pressure on the performance of IC engines.		06
UNIT – 4: (14 Hours)		
3. Operation, maintenance and management of construction equipment; Compacting and stabilizing equipments; Dozer; Scarper; Track and Hauling Equipment; Belt Conveyor system; Cranes		07
4. Operation, maintenance and management of construction equipment: Excavators; Dragline and Clamshell; Trenching machines; Earth and Rock drilling machines; Concrete and concreting equipment's.		07
5. Construction Asset Management: Overview of importance of asset management in construction industry; Outline to the asset management software for the construction and its content.		
TOTAL SUBJECT HOURS		54
NOTE: 20% of the syllabus shall be given for self-study		
Total Days of study	Total Study Weeks	Total hours of current subject study
90	90/5 = 18	18 x 3hrs/week = 54 Hours

REFERENCES:

- I. Chitkara K K, (2011), "Construction Project Management- Planning, Scheduling and Controlling"-- Tata McGraw Hill Education Private Limited.
- II. Chitale A K, Gupta R C, (2013), "Material Management Text and Cases" – PHI Learning Private Limited.
- III. Gopalakrishnan P, (2011), "Handbook of Materials Management" - PHI Learning Private Limited.
- IV. Punmia B C, Khandewal, (2012), "Project Planning and Control with PERT and CPM" – Laxmi Publications Private Limited.
- V. Peurifoy R L, Schexnayder C J, Shapira A, (2012), "Construction Planning, Equipments, and Methods"- Tata McGraw Hill Education Private Limited.
- VI. Rangwala S C, (2012), "Construction of structures and management of works" –Charotar Publishing House Private Limited.
- VII. Nicholas J M, Steyn H, (2012), "Project management for engineering, business and technology" – by Routledge Publication.
- VIII. Kotadia A S, (2012), "Construction Management and Equipments" – Mahajan Publishing House.