

For Syllabus, Question Papers, Notes & many More

CN5102 CONSTRUCTION EQUIPMENT

DETAILED SYLLABUS

UNIT I CONSTRUCTION EQUIPMENTS AND MANAGEMENT

Identification – Planning of equipment – Selection of Equipment - Equipment Management in Projects - Maintenance Management – Equipment cost – Operating cost – Cost Control of Equipment - Depreciation Analysis – Replacement of Equipment- Replacement Analysis – Safety Management.

UNIT II EQUIPMENT FOR EARTHWORK

Fundamentals of Earth Work Operations - Earth Moving Operations - Types of Earth Work Equipment - Tractors, Motor Graders, Scrapers, Front end Waders – Dozer, Excavators, Rippers, Loaders, trucks and hauling equipment, Compacting Equipment, Finishing equipment.

UNIT III OTHER CONSTRUCTION EQUIPMENT

Equipment for Dredging, Trenching, Drag line and clamshells, Tunneling – Equipment for Drilling and Blasting - Pile driving Equipment - Erection Equipment - Crane, Mobile crane - Types of pumps used in Construction - Equipment for Dewatering and Grouting – Equipment for Demolition under water concreting equipment's.

UNIT IV ASPHALT AND CONCRETE PLANTS

Aggregate production- Different Crushers – Feeders - Screening Equipment - Handling Equipment - Batching and Mixing Equipment - Pumping Equipment – Ready mix concrete equipment, Concrete pouring equipment. Asphalt Plant, Asphalt Pavers, Asphalt compacting Equipment.

UNIT V MATERIALS HANDLING EQUIPMENT

Forklifts and related equipment - Portable Material Bins – Material Handling Conveyors – Material Handling Cranes- Industrial Trucks.

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REFERENCES

1. Deodhar, S.V. Construction Equipment and Job Planning, Khanna Publishers, New Delhi, 1988.
2. Dr.Mahesh Varma, Construction Equipment and its planning and Application, Metropolitan Book Company, New Delhi. 1983.
3. Peurifoy, R.L., Ledbetter, W.B. and Schexnayder, C., Construction Planning, Equipment and Methods, McGraw Hill, Singapore, 2006.
4. Sharma S.C. Construction Equipment and Management, Khanna Publishers, New Delhi, 1988.

OBJECTIVES

To study and understand the various types of equipments used for earthwork, tunneling, drilling, blasting, dewatering, material handling conveyors and its applications in construction projects.