



SURVEYING PRACTICE, ESTIMATING & TOTAL STATION.

Module -1: SURVEYING & LEVELLING.

❖ INTRODUCTION

Def " of surveying
Aims of surveying
Classification of surveying
Principles of surveying.

❖ LINEAR MEASUREMENT & CHAIN SURVEYING

Measurement of distance by tapes/chains
Types of chains & tapes
Ranging
Chaining across different types of obstacle
Principle of chains surveying
Well & ill conditioned triangle
Field book
Offsets.

❖ ANGULAR MEASUREMENT

Compass – Types of compass
Temporary, adjustment of compass
Concept of meridian (Magnetic, true, Arbitrary)
Concept of Bearing (W.C.B, Q.B, R.B) & Fore & Back Bearing, Magnetic declination
Local attraction.

❖ PLANE TABLE SURVEYING

Objective & principle of plane table surveying
Accessories used in plane table surveying
Methods of plane table surveying

❖ LEVELLING

Def "Purpose of Levelling
Description of essential features
Levelling staff

Temporary adjustment of level

Types of Levelling

Calculation of R.L

❖ THEODOLITE SURVEYING

Def"of terms

Component parts of a transit Theodolite

Temporary adjustment of Theodolite

Measurement of horizontal angle, vertical angle, deflection angle & determination of Magnetic bearing.

Methods of traversing

Latitude & Departure ,Independent & Consecutive coordinate.

Module -2 ESTIMATING :

❖ INTRODUCTION.

Types of estimate – Plinth Area, Floor area, Carpet area

Units of Measurements

Purpose of Estimating

❖ QUANTITY ESTIMATE OF BUILDING

Short wall & Long wall method & center line method

Detailed estimate of single storied flat roof building & single inclined roof building.

❖ ANALYSIS OF RATE.

❖ DETAILED ESTIMATE OF IRRIGATION STRUCTURE

Culvert and bridges

Syphon and fall

Estimate of Road.

MODULE -3 TOTAL STATION:

Working Principle of a Total station

Set up & use of Total Station

Component parts of Total Station

Measurement of angles, distance of points & height of a object by using total station

Check & adjustment of errors