

# **BASIC SURVEYING LAB (P-23.3)**

## **1. Chain surveying:**

- i) a) Ranging a line**
- b) Chaining a line and recording in the field book**
- c) Taking offsets - perpendicular and oblique (with tape only)**
- d) Setting out right angles with a tape**
- ii) Chaining of a line involving reciprocal ranging**
- iii) Chaining of a line involving obstacles to ranging**
- iv) Chain survey of a small area.**

## **2. Compass Surveying:**

- i) a) Study of prismatic compass**
- b) Setting the compass and taking observations**
- c) Measuring angles between the lines meeting at a point**

## **3. Levelling:**

- i) a) Study of dumpy level and levelling staff**
- b) Temporary adjustments of various levels**
- c) Taking staff readings on different stations from single setting and finding differences of level between them**
- ii) To find out difference of level between two distant points by shifting the instrument**
- iii) Longitudinal and cross sectioning of a road/railway/canal**
- iv) Setting up a gradient by dumpy and auto-level**

## **4. Minor instruments:**

- i) Demonstration and use of minor instruments like Ceylon Ghat Tracer, Tangent Clinometers, Pantograph, Abney level etc**
- ii) Use of planimeter for computing areas**