

# PCCE4205 Surveying - I

## **Module I**

Linear measurement and chain survey: Use of various types of chains and tapes, measurement of correct length of lines, direct and indirect ranging, chaining along sloping ground. Obstacle in chaining, errors and their elimination.

Compass surveying: Use of prismatic compass, temporary adjustment, bearing of a line, local attractions, correction of bearing

Plane table surveying: Methods of plane tabling, radiations, intersection, traversing and resection, two point and three point problem. Adjustment and common error in plane table survey.

## **Module II**

Levelling: Use of dumpy level and levelling staff. Temporary and Permanent adjustment of dumpy level, Reduction of levels by height of instrument and rise and fall method. Curvature and refraction error, sensitiveness of level tube, reciprocal levelling, levelling difficulties and common errors

## **Module III**

Contouring: Contour interval and horizontal equivalent, characteristics of contours, methods of contouring- different and indirect method, contour gradient

Theodolite Survey: Use of theodolite, temporary adjustment, measuring horizontal and vertical angles, theodolite traversing

### **Text Books:**

1. "A Text Book of Surveying-I", S.K.Duggal, TMH Publisher
2. Surveying- Vol-1, B.C. Punmia

### **Reference Books:**

3. Surveying and Levelling Vol-1, T. P. Kanetkar and S. V. Kulkarni
4. Surveying Vol-1 by R Agor