

## 09ENG 2.6: SURVEYING & LEVELLING

Written by Administrator  
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**CONTACT PERIODS: 4 (2 LECTURE + 2 PRACTICAL) PER WEEK**

**DURATION OF EXAM : 3 HRS**

**PROGRESSIVE MARKS : 50**

**EXAM MARKS : 100**

### **OBJECTIVE:**

To develop the knowledge and skills related to surveying and levelling principles and practice.

### OUTLINE:

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Surveying – Definition, classification, principles of surveying, character of work, shrunk scale.

Chain Survey – Instruments used, Types of chain, Instruments for ranging. Setting out angles, erecting perpendiculars.

Field Work – Chain triangulation, recording and plotting, errors in survey.

Plane table survey – Plane table and accessories. Methods of plane table survey, Radiation, Intersection, traversing and resection, field problems.

Levelling – Definition, classification, booking and reduction of levels, longer levelling, errors

Theodolite – Study of instruments, definition of different terms, temporary adjustments, uses, measuring horizontal and vertical angles, method of repetition, extension lines

Contouring – Characteristics of contours, direct and indirect methods of contouring, interpolation, uses of contours, setting out works such as centre lines of a building, grade for sewer, centre line of a bridge.

**References:**

1. "Surveying Vol I" by DR PC Punmia
2. "Surveying and Levelling (Part-1)" by Kanetkar TP and Kulkarni SV □