

**THE ELEMENTS OF  
SURVEYING  
AND GEODESY**

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The Elements of Surveying and Geodesy by William Charles Popplewell

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**WILLIAM CHARLES POPPLEWELL**

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73 1880  
AUGUST 1880



Old 10-inch Theodolite of Everest design, used on the early Indian Survey.

This has an arrangement for disconnecting from and reattaching to the pillar with the horizontal circle vertical so as to enable vertical angles beyond the range of the vertical segments of arc to be taken when required.

# THE ELEMENTS OF SURVEYING AND GEODESY

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## PREFACE

AN attempt is made in the following pages to present a comprehensive view of the subject of geodesy in its wider sense, in order to provide students and others with such information as may lead to a sound knowledge of the fundamental ideas involved. A full knowledge of all the details of any one particular branch of surveying can only be acquired through experience. As leading towards this end the author has always advocated personal instruction in the use and adjustment of instruments, as well as the useful practice which may be obtained in a students' survey camp. But before either of these is possible the student must have mastered the bedrock principles, and the author hopes that a careful perusal of these pages may help him to do this.

Worked-out examples have been inserted where they seemed to be desirable, and a few examination questions are added at the end of the book. A list of references is also given to enable readers to consult authorities on specified branches of the subject.

The author desires to take this opportunity of thanking Messrs. W. F. Stanley & Co., Ltd., for the loan of many blocks of representative instruments and for much helpful advice; and also Messrs. C. F. Casella & Co., Ltd., and Messrs. J. H. Steward, Ltd.

W. C. P.



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses and income.

The second part of the document provides a detailed breakdown of the accounting cycle. It outlines the ten steps involved in the process, from identifying the accounting entity to preparing financial statements. Each step is explained in detail, with examples provided to illustrate the concepts.

The third part of the document discusses the various types of accounts used in accounting. It categorizes them into assets, liabilities, equity, revenue, and expense accounts. It also explains how these accounts are used to record transactions and how they are balanced.

The fourth part of the document discusses the importance of adjusting entries. It explains how these entries are used to ensure that the financial statements reflect the true financial position of the company at the end of the accounting period. Examples are provided to show how adjusting entries are recorded.

The fifth part of the document discusses the preparation of financial statements. It outlines the steps involved in preparing the balance sheet, income statement, and statement of owner's equity. It also discusses the importance of providing a clear and concise explanation of the financial results.

The sixth part of the document discusses the importance of internal controls. It explains how these controls are used to prevent and detect errors and fraud. It also discusses the various types of internal controls, such as segregation of duties and authorization.

The seventh part of the document discusses the importance of ethics in accounting. It explains how accountants are expected to act in a fair and honest manner and to follow the principles of professional conduct. It also discusses the consequences of unethical behavior.

The eighth part of the document discusses the importance of communication in accounting. It explains how accountants must be able to communicate effectively with their clients and colleagues. It also discusses the various methods of communication, such as writing and speaking.

The ninth part of the document discusses the importance of technology in accounting. It explains how the use of computers and software has revolutionized the accounting profession. It also discusses the various types of accounting software and how they are used.

The tenth part of the document discusses the future of accounting. It explains how the profession is expected to continue to evolve and how accountants must stay up-to-date on the latest developments. It also discusses the various career opportunities available in the field.

# CONTENTS

## CHAPTER I

### SURVEYING BY DIRECT MEASUREMENT—CHAIN SURVEYING

	PAGE
Chains—Errors in chains—Standardising chains—Tapes and steel bands—Arrows—Ranging poles—Instruments for determining right angles—Geometrical methods—Carrying out chain surveys—Reconnaissance—Arrangement of triangulation—Ranging a base—Use of the chain—Offsets—Chaining on sloping ground—Accuracy—Ranging over undulating ground—Keeping the field book—Obstacles in chain lines—Determination of areas—Example of calculation . . . . .	I

## CHAPTER II

### NEEDLE SURVEYS AND TRAVERSING

Traversing with the chain and tape—Needle traverses—Surveyor's compass, circumferentor, or dial—Errors of needles—Variation of the magnetic needle—Prismatic compass—Carrying out a needle survey—Working out and plotting—Rectangular co-ordinates—Methods of tabulation—Area enclosed—Notes on needle traverses . . . . .	38
---	----

## CHAPTER III

### THE PLANE TABLE

Method of intersection—Traversing with the plane table—The instrument—The alidade or straight edge—Alidade with telescope—Adjustments of plane table—Use of the plane table—Radiation with tachometer—Military plane table—Accuracy attainable . . . . .	60
--	----

## CHAPTER IV

### INSTRUMENTS USED IN THE MEASUREMENT OF ANGLES

The surveying telescope—The sextant—The box sextant—Adjustments and use of the sextant . . . . .	74
--	----

## CONTENTS

## CHAPTER V

## INSTRUMENTS USED IN THE MEASUREMENT OF ANGLES

*(continued)*

	PAGE
The theodolite—Description of a transit theodolite—Plain theodolite—Everest's theodolite—Adjustments and examination for constructional defects . . .	85

## CHAPTER VI

## CALCULATIONS OF DISTANCES AND HEIGHTS

Solution of plane triangles—Examples of solution of triangles and of problems relating to determination of heights . . . . .	102
--	-----

## CHAPTER VII

## LEVELLING AND CONTOURING

Curvature of the earth—Correction for refraction—General principles of levelling—Instruments used—Water level—Dumpy spirit level—Y level—Levelling staves—Manipulation of level—Adjustments of level—Taking a set of levels—Booking—Working out the level book—Reciprocal levelling—Bench marks—Flying levels—Precise levelling—Contour lines—Fixing contours—Fixing of heights by the barometer—The hypsometer . . . . .	109
---	-----

## CHAPTER VIII

## TACHEOMETRY OR RAPID SURVEYING

Surveying by visual angle and staff—Using ordinary theodolite telescope—Line of observation inclined—Staff inclined—Staff vertical—Porro's telescope—Surveying by vertical angles—Bar-subtense system—General hints—Accuracy—Rangefinders—Two-observer and single-observer rangefinders . . .	139
---	-----

## CHAPTER IX

## GEODETIC OR TRIGONOMETRICAL SURVEYING

General—Measurements of base lines—Measuring bars—Extending the base—Measurement of the angles—Signals—Ordnance surveys of Great Britain and of India—Reduction to sea-level—Solution of spherical triangles . . .	163
--	-----

## CHAPTER X

## GEODETIC ASTRONOMY

Finding the true meridian—Observations by day and night—Observations for latitude—Determination of longitude . . . . .	177
--	-----