Preface

It is **M. Maqsood Ali**, Assistant Professor of Mathematics, who uses a lot of diagrams to explain topics of Mathematics. His books are slightly different from other books. He writes examples with diagrams that everyone can understand them. His good choices of appropriate examples help to understand the topic easily. He has written this book for graduate students specially . The book covers all the topics of the syllabus of calculus of B.Sc.-I, University of Karachi.

A lot of **applications** from Physical Science, Life Science and Business and Economics are written for the students, so that they will be able to apply calculus in the real world easily. The students will have many new and different examples in this book.

Examples in chapter **Continuity** are given with diagrams and the students will find them new, interesting and easy to understand. At the end of this chapter the unsolved problems look like puzzle games. Almost all the theorems and formulas of Calculus are written for continues functions, so it is a very important chapter in calculus.

First chapter of the book **CLICK CALCULUS** is very interesting. Few sentences and few diagrams of this chapter explain why we learn Calculus.

Second chapter of the book **FUNCTIONS FORMING** is very important for those students who are interested in research and want to form functions for the collected data. In this chapter, the students will learn how and why Linear, Quadratic, Cubic, Polynomial, Exponential, Logarithmic, Trigonometric functions are formed.

Students study in many books just **Taylor's** and **Maclaurin's series** but in this book they will also read a lot of solved examples of Taylor's and Maclaurin's polynomials. Graphs of functions and polynomials are drawn to make students understand the Taylor's polynomial easily. Remainder of Taylor's polynomial is also discussed in detail, which is new and interesting addition for the students.

Chapter **INTEGRATIONS** begins with comparison of definite and indefinite integrations. Some formulas from Analytical Geometry are used in this chapter for applications of definite integrations. It will be very useful for engineering students as well. A new method of writing "**WHY and WHY NOT**" is introduced in this chapter for the first time.

The book will prove to be a treasure of mathematics for its innovative way of presentation: detailed discussion of topics, plenty of examples and diagrams and a variety of exercises to test students' learning step by step.

M. Maqsood Ali