



## Instrumentation and Process Control

**Author :** D.C. Sikdar  
**ISBN 13 :** 978-93-82609-04-9  
**ISBN 10 :** 93-82609-04-0  
**E-ISBN 13 :** 978-93-82609-04-9  
**Edition :** 1  
**Pages :** 368  
**Type of book :** Paperback  
**Weight (g) :** 520.00  
**Year :** 2022  
**Language :** English  
**Publisher :** Khanna Publishing House  
**Regular Price :** Rs 399.00  
**Sale Price :** Rs 319.20  
**Categories :** [All books](#), [Chemical Engineering](#), [UNIVERSITY RECOMMENDED](#)  
**Condition Type :** New  
**Country Origin :** India

---

## Product Description

---

This book is students friendly. It also demonstrates how to solve the industry related problems that crop up in Chemical Engineering Practice. The chapters are organized in a simple way that enables that students to acquire and in depth understanding of the subject. The emphasis is given to the fundamental of measuring instrument, Laplace Transform, Basic Concept of process control, first order and Second order system, Control of Industrial Bio-processes, Controller and Final control elements, Block diagram reduction techniques, Determination of Stability of a process, Advanced control techniques and control Structure of unit operations, all coming under the realm of Process Control. Apart from the numerous illustrations, the book contains review questions, exercises and aptitude test in chemical Engineering which bridge the gap between theoretical learning and practical implementation. All numerical problems are solved in a systematic manner to reinforce the understanding of the concepts. This book is primarily intended as a textbook for the under graduate students of Chemical Engineering, It will also be useful for other allied branches such as Medical Electronics, Aeronautical Engineering, Polymer Science and Engineering, Bio-technology as well as diploma in Chemical Engineering.



---

## Table of Contents

---

**Chapter 1:** Instrumentation Fundamental.

**Chapter 2:** Pressure Measurements.

**Chapter 3:** Temperature Measurements.

**Chapter 4:** Flow Measurements.

**Chapter 5:** Level Measurements.

**Chapter 6:** Laplace Transform.

**Chapter 7:** Basic Concept of Process Control and First Order System.

**Chapter 8:** First Order System in Series.

**Chapter 9:** Second Order System.

**Chapter 10:** Industrial Bio-processes.

**Chapter 11:** Controllers and Final Control Elements.

**Chapter 12:** Block Diagram and Transient Response of Closed Loop Control System.

**Chapter 13:** Stability.

**Chapter 14:** Advanced Control Techniques.

**Chapter 15:** Control Structure of Unit Operations.

**Answer to Exercise Problems**

**Appendix**

Index

---

## Author

---

**D.C. SIKDAR** D. C. Sikdar (Ph.D.) is an associate professor, Department of Chemical Engineering, Dayananda Sagar College of Engineering, Bangalore, with more than two and half decades of teaching experience. Prof. Sikdar has published many papers in national and international journals of repute. he has received Best Research Thesis Award from Karnataka State Bio-fuel Development Board for guiding M. Tech Thesis on "Development of Bio-Hydrogen Dependent Fuel Cell using Micro Algae" in 2012. Prof. Sikdar is also a member of Indian Society of Technical Education (ISTE) and Indian Institute of Chemical Engineers (IICHE).



**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: [contact@khannabooks.com](mailto:contact@khannabooks.com) | Tel: 011-2324 44 47 - 48 | Mobile: + +91-99109 09320