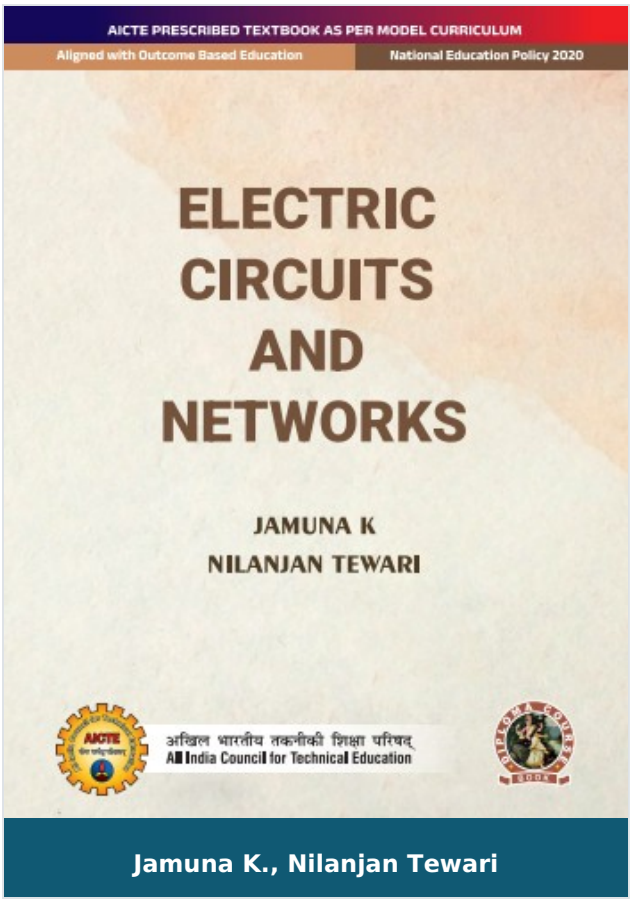


Electric Circuits and Networks

Author :	Jamuna K., Nilanjan Tewari
ISBN 13 :	978-93-55389-43-5
ISBN 10 :	9355389434
E-ISBN 13 :	978-93-55389-43-5
Edition :	First
Pages :	336
Type of book :	Physical
Year :	2026
Language :	English
Publisher :	Khanna Publishing House
M.R.P :	Rs 624.00
Categories :	English Books, AICTE Prescribed Textbooks
Condition Type :	New
Country Origin :	India

Product Description

Electric Circuits and Networks

Electric circuits and networks is the fundamental and essential subject for circuit branches in engineering. The book introduces the concepts of single-phase ac circuits and its analysis, generation of the three-phase power supply, star/delta connected three-phase systems operating under balanced and unbalanced loading conditions. Transient response of first and seconder order electric circuits are included in time domain analysis as well as in LaPlace analysis. Two port network parameters and relationship among those parameters are explained. At the end all the chapters, problems are solved using LTspice software for the purpose of practical classes. The major areas covered in this book are

- Phasor and its representation
- Steady state analysis of single-phase ac circuits
- Power and power factor calculations for single-phase ac circuits
- Resonance in series and parallel circuits
- Source transformation
- Single-phase ac circuits analysis: Node analysis and mesh analysis
- Single-phase ac circuits theorems: Thevenin/Norton/Maximum power transfer
- Duality of the electric circuits
- Voltage and current relations for star/Delta connected three-phase systems
- Power and power factor calculations for three-phase ac systems
- Transient response of ac circuits of first and second order ac circuits
- Laplace transform solution of first and second order ac circuits
- Graph theory concepts of electric circuits
- Tie-set analysis and cut-set analysis of electric circuits
- Two-port networks and parameters

Khanna Publishing House

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

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

Table Of Contents

- Foreword
- Acknowledgement
- Preface
- Outcome Based Education
- Course Outcomes
- Guidelines for Teachers
- Guidelines for Students
- Abbreviations and Symbols
- List of Figures
- List of Tables
- Semiconductor Diodes
- Network Reduction and Theorems
- Three Phase Circuits
- Transient Response of First and Second Order Electric Circuits
- Graph Theory
- CO and PO Attainment table
- Index

Author

Jamuna K.

Dr. Jamuna K. Professor, Vellore Institute of Technology Dr. Nilanjan Tewari Assistant Professor, Vellore Institute of Technology

Nilanjan Tewari

Khanna Publishing House

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

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

Dr. Nilanjan Tewari Assistant Professor, Vellore Institute of Technology

Khanna Publishing House

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

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