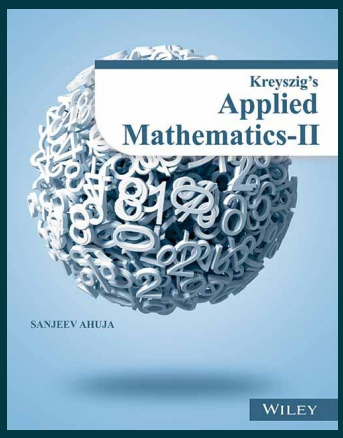


Kreyszig's Applied Mathematics-II

By Sanjeev Ahuja

Paperback 9788126553754 ₹792.00

Pages: 462

Description

This version of Advanced Engineering Mathematics by Prof. Erwin Kreyszig is globally the most popular textbook on the subject and is restructured to the present content in a concise and easy-to-understand manner. It fulfills the need for a book that not only effectively explains the concepts but also aids in visualizing the underlying geometric interpretation. Every chapter has easy to follow explanation of the theory and numerous step-by-step solved problems and examples. The questions have been hand-picked to suit the current pattern of questions asked. Extreme care has been taken to provide careful and correct mathematics, outstanding exercises.

Table of Contents

Preface

Chapter 1 Theory of Equations

1.1 Introduction

1.2 Polynomial

1.3 General Equation

1.4 Degree of an Equation

1.5 Roots of an Equation

1.6 Important Theorems

1.7 Synthetic Division Method

1.8 Fundamental Theorem of Algebra

1.9 Relation between Roots and Coefficients of an Equation

1.10 Reciprocal Equation (RE)

1.11 Transformation of Equations

1.12 Beta and Gamma Functions

Chapter 2 Laplace transforms and it’s Application

2.1 Introduction

2.2 Laplace Transforms: Basic Concepts

2.3 Laplace Transform of Elementary Functions (by Direct Application of Definition)

2.4 Properties of Laplace Transforms

2.5 Laplace Transform of Multiplication of a Function f (t) by t

2.6 Laplace Transform of Division of a Function f (t) by t

2.7 Laplace Transform of Derivative of a Function f (t)
2.8 Laplace Transform of an Integral
2.9 Laplace Transform of Periodic Functions
2.10 Evaluate the Integrals using Laplace Transform
2.11 Inverse Laplace Transform
2.12 Inverse Transform of Logarithmic and Trigonometric Functions
2.13 Inverse Transform using Integration
2.14 Partial Fraction Method to Find the Inverse Laplace Transform
2.15 The Convolution Theorem
2.16 Some Special Functions and Their Laplace Transforms
2.17 Solution of Differential Equations with Laplace Transform
2.18 Differential Equation (IVPs) with Variable Coefficients
2.19 Solution of Simultaneous Linear Differential Equations
Chapter 3 Differential Equations of First Order
3.1 Introduction
3.2 Some Important Definitions
3.3 Formation of Differential Equation (First Order and First Degree)
3.4 Solution of Differential Equations (First Order and First Degree)
3.5 Methods to Solve Differential Equations (First Order and First Degree)
3.6 Differential Equations Reducible to Exact Form (Integrating Factors)
3.7 Linear Ordinary Differential Equations
3.8 Applications of Differential Equations
Chapter 4 Second and Higher Order Differential Equations
4.1 Introduction
4.2 Linear Differential Equations
4.3 Homogeneous Linear Differential Equations of Second Order with Constant Coefficients
4.4 Higher Order Linear Homogeneous Differential Equations
4.5 Non-Homogeneous Linear Differential Equations with Constant Coefficients
4.6 Differential Equations with Variable Coefficients Reducible to DE with Constant Coefficients
4.7 Method of Variation of Parameters
4.8 Method of Undetermined Coefficients (to find the Particular Integral)
4.9 Simultaneous Linear Differential Equations
4.10 Application to Bending of Beams
4.11 Application to Simple Electric Circuits
4.12 Simple Harmonic Motion
Chapter 5 Vector Calculus
5.1 Introduction
5.2 Vector Algebra

5.3 Differentiation of a Vector

5.4 Gradient of a Scalar Field. Directional Derivative

5.5 Angle of Intersection of Two Surfaces

5.6 Divergence of a Vector Field

5.7 Curl of a Vector Field

5.8 Solenoidal and Irrotational Vectors

5.9 Line Integrals

5.10 Path Independence of line Integrals

5.11 Green’s Theorem in the Plane

5.12 Surfaces for Surfaces Integrals

5.13 Surface integrals

5.14 Stokes’s Theorem

5.15 Triple Integrals. Divergence Theorem of Gauss

Important Points and Formulas

Exercises

Answers

To purchase this product, please visit:
https://www.wileyindia.com/kreyszig-s-applied-mathematics-ii.html

Scan to buy