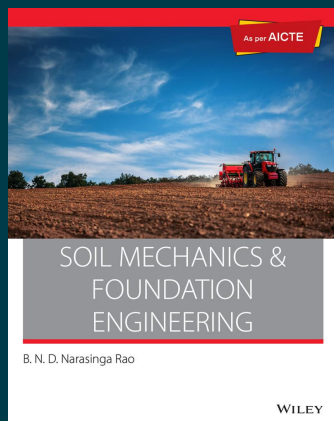


**WILEY**

# Soil Mechanics and Foundation Engineering, As per AICTE

By B.N.D. Narasinga Rao

**Paperback**

ISBN: 9788126540396

Publication: [ NOT PROVIDED ] *publication\_date*Page Count: [ NOT PROVIDED ] *pages* **pages****₹969.00**

## • Description

Soil Mechanics and Foundation Engineering has seen unprecedented growth over the last few decades both in terms of knowledge and practice as well as in its significance in civil engineering profession. The fundamentals of the subject are explained in a simple language in the book. Over 1300 numerical and objective questions with solutions have been included in the book. It is the author's experience that questions from competitive exams such as GATE, IES, IAS, IFS, etc., involve some of the subtle and fine concepts of the subject and their practical application, which cannot be gained by simple reading of the subject.

## • About the Author

### **B.N.D. Narasinga Rao**

The author Dr. B.N.D. Narasinga Rao, University First in M.E. (Soil Mechanics) and Ph.D. with CSIR SRF from Andhra University, in 1997, has over 25 years of teaching, research and consultancy experience which prompted him to write the present book on Soil Mechanics and Foundation Engineering. The author is formerly Professor and Principal of KKIT and KITS Engineering colleges and is currently Professor and Head of Civil Engineering, Anil Neerukonda Institute of Technology & Sciences (ANITS), Sangivalasa

## • Table of Contents

Foreword

Preface

Acknowledgements

1 Introduction

1.1 Introduction

1.2 Definitions

1.3 History of Soil Mechanics

1.4 Applications of Soil Mechanics

1.5 Professional Activities in Geotechnical Engineering

2 Origin and Formation of Soils

2.1 Introduction

2.2 Soil Formation

2.3 Weathering

2.4 Erosion

## 2.5 Factors Influencing Weathering and Soil Formation

### 2.6 Residual Soils

### 2.7 Transported Soils

### 2.8 Types of Soil Profile

### 2.9 Soil Horizons

### 2.10 Soil Deposits of India

## 3 Soil Mineralogy and Structure

### 3.1 Introduction

### 3.2 General Types of Soils Based on Particle Size

### 3.3 Soil Mineralogy

### 3.4 Primary and Secondary Minerals

### 3.5 Bonding in Soils

### 3.6 Mineralogy of Fine-Grained Soils

### 3.7 Kaolinite

### 3.8 Montmorillonite

### 3.9 Illite

### 3.10 Chlorite

### 3.11 Vermiculite

### 3.12 Isomorphous Substitution

### 3.13 Properties of Clay Minerals

### 3.14 Identification of Clay Minerals

### 3.15 Soil Structure and Soil Fabric

### 3.16 Mineralogy of Cohesionless Soils

## 4 Physical Properties of Soils

### 4.1 Introduction

### 4.2 Three-Phase System of Soil

### 4.3 Phase Diagram of Soil

### 4.4 Physical Properties of Soils

### 4.5 Functional Relationships between Physical Properties

### 4.6 Physical Properties in Terms of Mass

### 4.7 Functional Relationships of Physical Properties in Terms of Mass

### 4.8 Preparation of Soil Samples for Determination of Physical Properties

### 4.9 Determination of Water Content

### 4.10 Determination of Specific Gravity

### 4.11 Determination of in-situ Density

### 4.12 Relative Density

## 5 Plasticity Characteristics of Soils

### 5.1 Introduction

5.2 Consistency

5.3 Consistency Limits

5.4 Liquid Limit

5.5 Plastic Limit

5.6 Index Properties of Soils

5.7 Shrinkage Limit

5.8 Uses of Consistency Limits

5.9 Classification of Soils Based on Index Properties

4 Soil Classification  
4.1 Soil Classification  
4.2 Soil Classification  
4.3 Soil Classification  
4.4 Soil Classification  
4.5 Soil Classification  
4.6 Soil Classification  
4.7 Soil Classification  
4.8 Soil Classification  
4.9 Soil Classification  
4.10 Soil Classification  
4.11 Soil Classification  
4.12 Soil Classification  
4.13 Soil Classification  
4.14 Soil Classification  
4.15 Soil Classification  
4.16 Soil Classification  
4.17 Soil Classification  
4.18 Soil Classification  
4.19 Soil Classification  
4.20 Soil Classification  
4.21 Soil Classification  
4.22 Soil Classification  
4.23 Soil Classification  
4.24 Soil Classification  
4.25 Soil Classification  
4.26 Soil Classification  
4.27 Soil Classification  
4.28 Soil Classification  
4.29 Soil Classification  
4.30 Soil Classification  
4.31 Soil Classification  
4.32 Soil Classification  
4.33 Soil Classification  
4.34 Soil Classification  
4.35 Soil Classification  
4.36 Soil Classification  
4.37 Soil Classification  
4.38 Soil Classification  
4.39 Soil Classification  
4.40 Soil Classification  
4.41 Soil Classification  
4.42 Soil Classification  
4.43 Soil Classification  
4.44 Soil Classification  
4.45 Soil Classification  
4.46 Soil Classification  
4.47 Soil Classification  
4.48 Soil Classification  
4.49 Soil Classification  
4.50 Soil Classification  
4.51 Soil Classification  
4.52 Soil Classification  
4.53 Soil Classification  
4.54 Soil Classification  
4.55 Soil Classification  
4.56 Soil Classification  
4.57 Soil Classification  
4.58 Soil Classification  
4.59 Soil Classification  
4.60 Soil Classification  
4.61 Soil Classification  
4.62 Soil Classification  
4.63 Soil Classification  
4.64 Soil Classification  
4.65 Soil Classification  
4.66 Soil Classification  
4.67 Soil Classification  
4.68 Soil Classification  
4.69 Soil Classification  
4.70 Soil Classification  
4.71 Soil Classification  
4.72 Soil Classification  
4.73 Soil Classification  
4.74 Soil Classification  
4.75 Soil Classification  
4.76 Soil Classification  
4.77 Soil Classification  
4.78 Soil Classification  
4.79 Soil Classification  
4.80 Soil Classification  
4.81 Soil Classification  
4.82 Soil Classification  
4.83 Soil Classification  
4.84 Soil Classification  
4.85 Soil Classification  
4.86 Soil Classification  
4.87 Soil Classification  
4.88 Soil Classification  
4.89 Soil Classification  
4.90 Soil Classification  
4.91 Soil Classification  
4.92 Soil Classification  
4.93 Soil Classification  
4.94 Soil Classification  
4.95 Soil Classification  
4.96 Soil Classification  
4.97 Soil Classification  
4.98 Soil Classification  
4.99 Soil Classification  
4.100 Soil Classification

To purchase this product, please visit:  
<https://wiley.indiafin.com/soil-mechanics-and-foundation-engineering-as-per-aicte.html>



Scan to buy