



NIDA SERIES 130E

BASIC ELECTRICITY
UNIT I - DC CIRCUITS

Block 2
Multimeter Measurements

LESSON 2

METERS AND MULTIMETERS

OBJECTIVES

Upon completion of this lesson, the student will be able to:

1. Describe a typical multimeter and explain its purpose.
2. Explain the difference between analog and digital multimeters and describe the advantages and disadvantages of each.
3. Identify the five sections of a typical multimeter and describe their functions.
4. Operate typical analog and digital multimeters.
5. Use a multimeter to set and to measure DC voltages on the Nida Model 130E Test Console.

PREREQUISITES

None

EQUIPMENT REQUIRED

Nida Model 130E Test Console
Nida Series 130 Experiment Card:
PC130-CF
Nida Model 480 Hand-Held Analog
Multimeter, or equivalent
Nida Model 488 Hand-Held Digital
Multimeter, or equivalent
Nida Model 411 Digital Multimeter, or
equivalent

OVERVIEW

This lesson introduces students to meters and multimeters, the most commonly used test instruments in electronics today.

Students first learn what meters and multimeters are and what they do.

The lesson then explains the difference between analog and digital multimeters. Students learn the advantages and disadvantages of each.

The lesson next describes the five common sections and functions of a typical multimeter. Students learn to identify the basic multimeter controls and their functions. The four-part experiment provides students with hands-on training in operating meters and multimeters.

In addition to using the test console analog VOLTMETER, students operate an analog multimeter, and two different digital multimeters.

Following step-by-step experiment procedures, students use the instruments both to set and measure output voltages on the Nida Model 130E Test Console.

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Table of Contents All Test Answers For Nida Series 130e

1. Understanding the eBook All Test Answers For Nida Series 130e
 - The Rise of Digital Reading All Test Answers For Nida Series 130e
 - Advantages of eBooks Over Traditional Books
2. Identifying All Test Answers For Nida Series 130e
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an All Test Answers For Nida Series 130e
 - User-Friendly Interface
4. Exploring eBook Recommendations from All Test Answers For Nida Series 130e
 - Personalized Recommendations
 - All Test Answers For Nida Series 130e User Reviews and Ratings
 - All Test Answers For Nida Series 130e and Bestseller Lists

5. Accessing All Test Answers For Nida Series 130e Free and Paid eBooks
 - All Test Answers For Nida Series 130e Public Domain eBooks
 - All Test Answers For Nida Series 130e eBook Subscription Services
 - All Test Answers For Nida Series 130e Budget-Friendly Options
6. Navigating All Test Answers For Nida Series 130e eBook Formats
 - ePub, PDF, MOBI, and More
 - All Test Answers For Nida Series 130e Compatibility with Devices
 - All Test Answers For Nida Series 130e Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of All Test Answers For Nida Series 130e
 - Highlighting and Note-Taking All Test Answers For Nida Series 130e
 - Interactive Elements All Test Answers For Nida Series 130e
8. Staying Engaged with All Test Answers For Nida Series 130e
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers All Test Answers For Nida Series 130e
9. Balancing eBooks and Physical Books All Test Answers For Nida Series 130e
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection All Test Answers For Nida Series 130e
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine All Test Answers For Nida Series 130e
 - Setting Reading Goals All Test Answers For Nida Series 130e
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of All Test Answers For Nida Series 130e
 - Fact-Checking eBook Content of All Test Answers For Nida Series 130e
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

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