Applying and Qualifying for Apprenticeship in the Electrical Industry

Information for Applicants

— For Additional Information, Visit Our Website at www.njatc.org —

Table of Contents

NJATC
301 Prince George's Blvd., Suite D
Upper Marlboro, MD 20774
www.njatc.org

A Message to Applicants

The National Electrical Contractors Association (NECA) and the International Brotherhood of Electrical Workers (IBEW) jointly sponsor apprenticeship training programs that offer you the opportunity to earn wages and benefits while you learn the skills needed for a trade that can be both challenging and rewarding. You will have the chance to use your mind, as well as your physical skills, to complete work in a variety of settings with the constant opportunity to learn something new.

This brochure is intended to help you make an informed decision about whether or not you would like to pursue an electrical apprenticeship. It will explain how the application process works. It has three parts:

I. LEARNING ABOUT ELECTRICAL WORK—provides information about the work done in electrical work specialties and the abilities those specialties require. It contains an abilities checklist you can complete to determine whether or not electrical work suits you.

II. APPLYING FOR APPRENTICESHIP— provides information about the qualification requirements and application process. It contains a reminder list to help you with the testing process.

III. PREPARING FOR THE TEST—provides sample questions and answers from the NJATC Aptitude Test Battery, which is a part of the application process.

Electrical Work Specialties

What is it like to work in the electrical industry? There are four primary specialties in electrical work:

- INSIDE WIREMEN – primarily perform electrical construction work in commercial and industrial settings.
- OUTSIDE LINEMEN – primarily perform electrical work for transmissions and distribution of electrical energy.
- RESIDENTIAL WIREMEN – primarily perform electrical construction work in residential settings.
- TELECOMMUNICATIONS INSTALLER-TECHNICIANS – primarily perform electrical installations for voice, data, video, sound, and other telecommunications areas.

By far, Inside Wiremen is the largest of the four electrical work specialties. Nationally, the Inside Wiremen position has over 200,000 Journeymen and Apprentices who are members of the IBEW. Just as important, though fewer in number, are the Outside Linemen, Residential Wiremen, and Telecommunications Installer-Technicians.

Training programs vary in length for the four electrical work specialties. Inside Wiremen apprenticeship programs are five years; Outside Linemen apprenticeship programs are three and a half years; Residential Wiremen and Telecommunications Installer-Technicians apprenticeship programs are three years.

The following pages provide additional information about each of the four specialties. An abilities checklist, designed to help you determine how well suited you are for electrical work, appears at the end of this section.

Inside Wiremen

Inside Wiremen install conduit, electrical wiring, fixtures, and electrical apparatus inside commercial buildings and in a multitude of industrial settings. Major duties for Inside Wiremen include:

- Planning and Initiating Projects
- Establishing Temporary Power during Construction
- Establishing Grounding Systems
- Installing Service to Buildings and Other Structures
- Establishing Power Distribution within a Project
- Planning and Installing Raceway Systems
- Installing New Wiring and Repairing Old Wiring
- Providing Power and Controls to Motors, HVAC, and Other Equipment
- Installing Receptacles, Lighting Systems, and Fixtures
- Troubleshooting and Repairing Electrical Systems
- Installing and Repairing Traffic Signals, Outdoor Lighting and Outdoor Power Feeders
- Installing Fire Alarm Systems

In performing these duties, Inside Wiremen must use many different kinds of tools, ranging from simple one and two-hand tools (such as pliers, screwdrivers, and cable-cutters) to power-assisted tools like electric drills and cable pullers. They occasionally operate heavy equipment such as trenchers and aerial lifts.

Over the course of the five-year Inside Wiremen apprenticeship program, apprentices must acquire a wealth of technical knowledge. A recent job analysis identified 83 specific knowledge areas that are important for successful job performance. A few of the most important ones are knowledge of:

- The National Electrical Code
- How to Work With Energized Circuits
- Blueprints (Including Symbols Used)
- Electrical Schematic Diagrams
- State and Local Electrical Codes
- First Aid
- Hazardous Materials
- Specific Job Safety Rules

Some of the most important skills to be learned are:

- Skill at Performing CPR
- Skill at Reading a Wire Table to Determine Conductor Size Required
- Skill at Terminating Aluminum or Copper Cable
- Skill at Terminating High Voltage Cable
- Skill at Splicing High Voltage Cable

Outside Linemen

While Inside Wiremen install conduit, electrical wiring, fixtures, and electrical apparatus, Outside Linemen are often observed climbing poles or in bucket trucks, installing or repairing electrical power lines outdoors. Major duties of the Outside Linemen include:

- Planning and Initiating Projects
- Establishing OSHA and Customer Safety Requirements
- Setting Towers and Poles and Constructing Other Devices to Support Transmission/Distribution Cables
- Establishing Work Positions for Maintaining and Repairing Overhead Distribution or Transmission Lines
- Stringing New Wire or Maintaining Old Wire
- Installing and Maintaining Insulators
- Installing and Maintaining Transformers and Other Equipment

In performing these duties, Outside Linemen use climbing tools, hand tools, and heavy equipment on a daily basis.

Like Inside Wiremen, Outside Linemen also need to develop a great deal of technical knowledge during their apprenticeship. A recent job analysis identified 77 knowledge areas that are important for successful performance.

A few of the more important ones are knowledge of:

- How to Work With Energized Circuits
- How to Perform an Emergency Rescue
- First Aid
- Connections to Be Made For Various Transformers
- What Makes a Wooden Pole Unsafe to Climb
- Delta and Wye Transformer Connections
- Specific Job Safety Rules
- Appropriate Hand Signals to Use with Ground Crew or Equipment Operators
- The Proper Knot to Tie in Different Circumstances
- Blueprints, Including Symbols Used

Some of the most important skills to be learned are:

- Skill at Working on High Voltage Lines While Wearing Protective Equipment Such As Rubber Gloves
- Skill at Performing CPR
- Skill at Rigging Equipment
- Skill at Tying Knots
- Skill at Operating a Bucket Truck
- Skill at Splicing High Voltage Cable
- Skill at Splicing Aluminum or Copper Cable
- Skill at Driving a Truck

Residential Wiremen

Residential Wiremen work solely in residential settings (single and multi-family dwellings). Major duties for Residential Wiremen include:

- Planning and Initiating Projects
- Establishing Temporary Power during Construction
- Establishing Grounding Systems
- Installing Underground Systems (Slab/Foundation)
- Rough-In (Frame Stage)
- Installing Wire and Cable
- Trim Out
- Performing "Hot" Checks
- Troubleshooting and Repairing Electrical Systems

In performing these duties, Residential Wiremen must use many different kinds of tools, ranging from simple ones and two-hand tools (such as screwdrivers and cable cutters) to power-assisted tools like electric drills and screw guns. They occasionally operate heavy equipment such as trenchers.

Over the course of the three-year Residential Wiremen apprenticeship program, apprentices must become competent in many technical areas. A recent job analysis identified 85 specific areas of knowledge that are important for Residential Wiremen job performance.

A few of the most important ones are knowledge of:

- The National Electrical Code
- How to Work With Energized Circuits
- Blueprints, Including Symbols Used
- Electrical Schematic Diagrams
- State and Local Electrical Codes
- The Principles of Grounding
- First Aid
- Hazardous Materials
- Specific Job Safety Rules
- Proper Wire/Cable to Use in Different Circumstances

Some of the most important skills to be learned are:

- Skill at Performing CPR
- Skill at Reading a Wire Table to Determine Conductor Size Required
- Skill at Terminating Aluminum or Copper Cable
- Skill at Splicing Twisted Pair Cable
- Skill at Terminating Twisted Pair Cable
- Skill at Terminating Coaxial Cable

Telecommunications Installer-Technicians

Telecommunications Installer-Technicians install circuits and equipment for telephones, computer networks, video distribution systems, security and access control systems, and other low voltage systems. Major duties for Telecommunications Installer-Technicians include:

- Planning and Initiating Projects
- Installing Underground Voice or Data Circuit Feeders to Entrance Facilities
- Providing or Connecting to the Grounding Electrode System
- Installing Pathways and Spaces for Installation of Low Voltage Wiring
- Installing and Terminating Wires and Cables
- Installing Local Area Network (LAN) Cabling Systems
- Installing Security and Access Control Systems
- Installing Communications and Sound Distribution Systems
- Testing and Repairing Video, Voice, and Data Systems

In performing these duties, Telecommunications Installer-Technicians must use many different kinds of tools, ranging from simple ones and two-hand tools (such as screwdrivers and cable cutters) to power-assisted tools like electric drills and screw guns. They occasionally operate heavy equipment such as trenchers.

Over the course of the three-year Telecommunications Installer-Technicians apprenticeship program, apprentices must become competent in many technical areas. A recent job analysis identified 124 specific areas of knowledge that are important for Telecommunications Installer-Technicians' job performance. A few of the most important ones are knowledge of:

- Color Codes (Proper Termination Sequence)
- Structured Wiring
- Cable Testing Requirements and Standards
- Local Area Networks (LAN)
- The Basics of Telephony
- Blueprints, Including Symbols Used
- Electronic Industries Association (EIA)/Telecommunications Industry Association (TIA) Standards
- The Principles of Grounding
- First Aid
- Hazardous Materials
- Proper Wire/Cable to Use in Different Circumstances

Some of the most important skills to be learned are:

- Skill at Terminating Twisted Pair Cable
- Skill at Terminating Fiber Optic Cable
- Skill at Troubleshooting Through Segmentation and Isolation
- Skill at Diagnosing the Source of Equipment Malfunctions
- Skill at Splicing Copper, Coaxial and Fiber Optic Cable
- Skill at Performing CPR

Abilities Checklist

Electrical work can be challenging, complex, physically demanding, and very rewarding. We have found that applicants who have not worked on construction projects, received specific training, or who do not have friends or relatives in the industry are often unfamiliar with the wide range of tasks electrical workers perform, or the skills needed today to be a successful electrical worker. NJATC has prepared the following checklist to help prospective applicants measure their interest in day-to-day electrical work, and whether they will have the ability to succeed at the completion of their apprenticeship.

Thirty-five core abilities that are important for all four electrical worker specialties are listed on the following pages. The boxes to the left provide space to indicate your interest, as well as your capability, to perform the ability. If you are ***interested*** in performing work that requires the ability, place a checkmark under the column labeled "Interest." If you believe that you are ***capable*** of performing work that requires the ability, place a checkmark in the "Capability" column. In a few cases you might be unsure about your capability, especially if you have not worked with blueprints or technical documents. Consider your interest and capability based upon similar activities, such as automotive repair.

Interest	Capability	***Ability to . . .***
❑	❑	1. add, subtract, multiply, divide, and use algebraic formulas
❑	❑	2. read complex technical documents written in English
❑	❑	3. develop alternative solutions to a problem and choose the best alternative
❑	❑	4. communicate in writing with others
❑	❑	5. read and understand graphs, charts, and diagrams
❑	❑	6. plan and organize tasks to meet deadlines
❑	❑	7. understand how an electrical or mechanical system works
❑	❑	8. picture the way a construction project will appear before it is finished
❑	❑	9. be self-motivated, responsible, and dependable without close supervision
❑	❑	10. remain calm in an emergency situation
❑	❑	11. communicate orally with others in English
❑	❑	12. work smoothly with others as a team to complete a task
❑	❑	13. maintain good relations with others in a work setting
❑	❑	14. discriminate between colors
❑	❑	15. understand verbal instructions and warnings given in English
❑	❑	16. hear warning signals
❑	❑	17. maintain balance and perform construction tasks while on a ladder

Interest	Capability	***Ability to . . .***
❑	❑	18. coordinate body movements when using tools or equipment
❑	❑	19. reach and stretch to position equipment and fixtures while maintaining balance
❑	❑	20. bend or twist the body into unusual positions while working
❑	❑	21. traverse irregular surfaces while maintaining balance
❑	❑	22. perform physical tasks all day without becoming overly tired
❑	❑	23. use hands to manipulate small wires and objects
❑	❑	24. work with both hands
❑	❑	25. operate two-handed power equipment
❑	❑	26. regularly lift objects weighing up to 50 pounds
❑	❑	27. on occasion, lift objects weighing above 50 pounds
❑	❑	28. carry objects weighing up to 50 pounds for short distances
❑	❑	29. apply muscular force quickly to objects and equipment
❑	❑	30. push or pull heavy objects into position
❑	❑	31. climb ladders and poles up to 25 feet in height
❑	❑	32. work at heights
❑	❑	33. work in extreme hot and cold temperature conditions
❑	❑	34. work in a noisy environment
❑	❑	35. work at depths, such as in trenches, manholes or deep vertical shafts

A particular employer might not require every one of these abilities for every electrical worker, and the importance of each may vary by the type of electrical job or employer and the level of experience. Many electrical contractors are required by federal or state law to consider making reasonable accommodations for otherwise qualified employees with disabilities, and in some cases accommodations might be available. Our research has shown, however, that the listed abilities are significant on most job sites, and they are all usually needed in order to perform the essential functions of the job of an electrical worker. That is why all of these abilities, and others, are usually viewed by the NJATC as necessary to successful completion of any electrical apprenticeship program.

If you checked interest and/or capability in many of the abilities, you may be well suited for electrical work. If you checked relatively few abilities, or were unsure about checking them, you should take steps to learn more about electrical work. The fact that you do not have or cannot acquire a particular ability does not prevent you from applying for the apprenticeship programs, but it could present a problem during your training and/or on the job. Some preparatory steps you can take include:

- Look for books on electrical construction work in the library.

- Access the NJATC website at http://www.njatc.org. It provides detailed job descriptions for the four electrical work specialties, as well as other relevant information.

- Enroll in the NJATC's online **Tech Math course**. To access the course, go to **http://www.njatc.utk.edu**.

- Ask the Training Director at the IBEW/NECA training center in your area whether he or she could refer you to someone in the electrical industry who can answer any questions you may have.

Learning more about the work done by electrical workers will help you determine how well suited you are for a career in electrical construction.

The Application Process

To apply for any of the electrical apprenticeship programs, you must first complete an application form. Your application will be evaluated to determine whether or not you meet the local program's basic requirements. Minimum requirements for local JATCs may include any of the following:

- Minimum age requirement
- Show evidence of successful completion of one full year of high school algebra with a passing grade, or one post high school algebra course with a passing grade.
- Be at least a high school graduate, or have a GED, or in lieu of a high school diploma or GED, have a two-year Associate Degree or higher
- Provide an official transcript for high school and post high school education and training. If applicable, GED records must be submitted

Minimum requirements can be waived if you have been working in the electrical construction industry and meet specific work hour requirements (you must provide undisputable documentation of work hour experience).

If you meet the basic requirements, you will be scheduled to take the NJATC aptitude test battery – if required. The test battery consists of two tests. It will take approximately two and a half hours to complete. The number of items and the amount of time allotted for each test are shown on the following page.

Name of Test	Number of Items	Number of Minutes
Algebra and Functions	33	46
Reading Comprehension	36	51

You will take a short break between the Algebra and Functions Test and the Reading Comprehension Test.

Approximately two to four weeks after you take the test battery, your local JATC will receive the results. They will subsequently notify you concerning the disposition of your application. **A full six (6) months must elapse before you may retake the test. The six month rule remains in effect after each subsequent retake of the test.** PLEASE NOTE: WILLFUL ATTEMPTS TO VIOLATE THIS RULE MAY RESULT IN **PERMANENT** DISQUALIFICATION.

If you obtain a qualifying score on the test battery, you will be scheduled for an oral interview. You will be interviewed by a committee representing both NECA and the IBEW. Based on the interview, and a review of your qualifications, you will receive an overall ranking. Your name will be placed on an eligibility list for two (2) years. As new positions become available in the apprenticeship program, names will be taken off the respective eligibility list in order of the ranking score. If you are not selected to begin an apprenticeship during that two-year period, you will need to reapply if you are still interested.

Some apprenticeship programs have additional basic requirements such as drug testing, a physical examination, security background check, or a valid driver's license.

A Note to Those with Disabilities

We recognize and comply with our obligations under the Americans with Disabilities Act to not discriminate against qualified persons with disabilities.

If you are a person with a physical or mental impairment (including learning disabilities) that you believe may affect your ability to complete any aspect of the application process (including testing), and if you need an accommodation to ensure that the test battery accurately measures your skills and abilities, **you must notify the AJATC/JATC before, or as soon as you are scheduled to take the NJATC aptitude test battery.** Accommodation requests given on the test day **CANNOT** be addressed that day. In most cases, you will need to provide:

1. Documentation of your disability, and
2. Documentation of the need for a particular accommodation.

Your request will be considered promptly.

Questions and Answers

Q. If I do not score well on the tests, can I take them again?

Yes, you may take the test battery again after a period of **six (6) months** has elapsed from your most recent test date.

Q. Are there any penalties for guessing on the tests?

No, there are no penalties for guessing. Your score will be based on the number of items you answer correctly.

Q. Should I work as fast as I can when taking the tests?

Most applicants will find they have plenty of time to complete each of the tests without rushing. You should work steadily and carefully. Do not spend too much time on any one question.

Q. Should I study to do better on the tests?

You should review the sample questions in this booklet. If you find that certain types of questions are difficult for you, you can review material that is similar to those questions. However, there is no need to memorize certain formulas or factual material in order to do well on the tests. **Previous knowledge of electrical work is not required.**

Q. Will I receive a report of my score?

You will be informed whether or not you have received a qualifying score. Exact scores are not provided.

Q. What if I become ill or have an emergency on the day of the test?

If you are unable to attend the test session for which you are scheduled, you should contact the local Joint Apprenticeship and Training Committee to see if you can take the tests at another time. Rescheduling is **not** guaranteed.

Q. What should I bring on the day of the test?

Remember to bring a **photo ID** to the test session. Pencils and all other materials will be provided. **You will not be able to use a calculator for the tests.**

Q. If I have to leave before I finish all of the tests, can I complete the tests another day?

No. If you do not complete all of the tests, your score will be based on the questions you do complete. **The tests must be completed during your test session. You cannot finish the tests on another day. You will not be able to reschedule to take the tests again for a minimum of six (6) months.**

Reminders for Applicants

- For optimal test performance, get a good night's rest and eat a nutritious meal prior to taking the tests.
- Report to the test center early. It is a good idea to arrive at the test center at least **15 minutes** before the scheduled testing time.
- On your scheduled test day, **remember to bring a photo ID with you to the testing center**. Your ID will be checked before you will be allowed to take the tests. **No ID, No Test, No Exceptions!**
- Do **not** bring a calculator. If you bring a watch with a built-in calculator, you will be asked to remove it during the test session.
- Plan on spending **approximately 3 hours** at the test center on your scheduled test day.
- **Be sure to make arrangements for childcare ahead of time.** Children will not be allowed at the test center.
- **Do not** attempt to retake the test battery for **six (6) months** after your last test date. If you retest before the six (6) month period has elapsed, your score will not be valid and you will not be allowed to retest for *another* six (6) months. **Please take this warning seriously. This is YOUR responsibility.**
- Make arrangements with the JATC **before** you report for testing if you will need special accommodations during the testing procedure.

For Your Information:

These tests are validated for use by sponsors of IBEW/NECA electrical apprenticeship programs. They have been developed to assist in the selection of apprentices for the respective apprenticeship programs.

The fact that an applicant is not scheduled for an oral interview, as a result of this test battery, does not speak for the applicant's ability, or lack thereof, to be most successful in many other occupations. This test was specifically developed to assist our program sponsors, helping them to select those who are most likely to succeed in our apprenticeship programs.

Many apprenticeship programs receive large numbers of applicants - four, five, six or more times the number of new apprenticeship openings (as defined by the limited number of job and training opportunities being available at a given time). The validated testing instrument is a tool to assist in the selection of the very best applicants that have an aptitude matching the specified job performance requirements. In this way, the number of applicants brought to the interview table is based upon objective, equitable, job-related criteria.

Instructions for the Sample Test

As part of the selection process, you may be required to take an aptitude test battery designed to determine whether you possess the abilities that will help you succeed within the electrical construction industry. The following pages provide a description of each of the tests and some sample test questions. These questions are similar to those on the actual tests, allowing you to know what to expect on the day of your test session.

You may use these items as a sample test and then check your answers with the key that appears on page 30 of this booklet. A sample test answer sheet is shown on page 29. You may remove this answer sheet by cutting along the dotted line. This allows you to use it without turning back and forth in the booklet. Record your answers to the sample questions on the answer sheet.

You should read the sample questions on each test carefully and then examine each of the responses. Only one answer is correct for each question. Choose the response that you think is correct, then mark that answer on the answer sheet by blackening the letter that corresponds to your answer. When you are finished, turn the answer sheet over and check your answers with the key on page 30.

If you find some of the sample items to be difficult for you, you may want to review material that is similar to the sample items.

Remove the answer sheet on page 29.

Sample Algebra and Functions

This is a test of your ability to solve problems using algebra and associated mathematical functions. There are five (5) sample questions.

1. Consider the following formula:

   $A = B + 3(4 - C)$

   If B equals 5 and C equals 2, what is the value of A?

   A. 7
   B. 11
   C. 12
   D. 17

2. Consider the following formula:

   $y = 3(x + 5)(x - 2)$

   Which of the following formulas is equivalent to this one?

   A. $y = 3x^2 + 9x - 30$
   B. $y = x^2 + 3x - 10$
   C. $y = 3x^2 + 3x - 10$
   D. $y = 3x^2 + 3x - 30$

3. Consider the following pattern of numbers:

   110, 112, 107, 109, 104

   What is the next number in the pattern?

   A. 97
   B. 99
   C. 106
   D. 109

4. Consider the following formula:

   $$a = \frac{1}{2}b - 4$$

   Which of the following statements is true for this formula?

   A. When the value of b is less than 8, a is negative.
   B. When the value of b is greater than 8, a is negative.
   C. When the value of b is less than 8, a is positive.
   D. When the value of b is greater than 4, a is positive.

5. Consider the following table:

X	Y
0	-5
1	-4
2	-3
3	-2
4	-1
5	0
6	1

Which of the following choices represents the same relationship as demonstrated in this table?

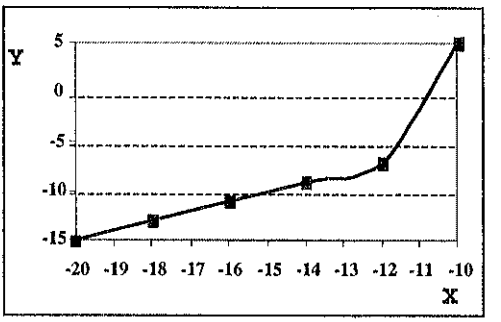
A.

X	Y
10	-40
20	-30
30	-20
40	-10

B. $Y = \frac{X}{2} - 5$

C. Y is equivalent to the difference between the value of X and a constant C, where C equals 5.

D.



Sample Reading Comprehension

This test measures your ability to obtain information from written passages. You will be presented with a passage followed by a number of questions about it. A sample passage is shown below, followed by three sample questions. This passage is shorter than those on the actual test.

Passage

The timing of New Year's Day has changed with customs and calendars. The Mayan civilization, on what is now called the Yucatan peninsula of Mexico, celebrated the New Year on one of the two days when the noonday sun is directly overhead. In the equatorial regions of the earth, between the Tropics of Cancer and Capricorn, the sun is in this position twice a year, once on its passage southward, and once on its passage northward. At the early Mayan city of Izapa in the southern Yucatan, the overhead date for the sun on its southward passage was August 13. The Mayans celebrated this as the date for the beginning of the New Year. Later at the more northerly Mayan site at Edzna, the corresponding overhead date is July 26. Analyses of Mayan pictorial calendars indicate that they celebrated the New Year on August 13 prior to 150 AD, and on July 26 after that year. This change has been explained by archaeological dating showing that 150 AD was the time that the Mayans moved the hub of their civilization from the southern to the northern site.

6. According to the passage, the sun at Edzna was directly overhead at noon on:

   A. July 26 only
   B. August 13 only
   C. July 26 and one other date
   D. August 13 and one other date

7. If the Mayans had moved their civilization's center south of Izapa, their new date for celebration of the New Year would probably have been closest to which of the following dates?

   A. January 1
   B. February 20
   C. March 25
   D. September 15

8. Based on the information in the passage, which of the following statements is true?

   A. Mayans made Edzna the capital because it was more temperate than Izapa.
   B. All Mayans moved to Edzna in 150 AD.
   C. Mayans used calendars to mark the passage of time.
   D. The Mayan city of Izapa was destroyed in 150 AD.

Sample Test Answer Sheet

You may wish to remove this answer sheet from the booklet to use when answering the sample questions.

Sample Algebra and Functions

1. [A] [B] [C] [D]
2. [A] [B] [C] [D]
3. [A] [B] [C] [D]
4. [A] [B] [C] [D]
5. [A] [B] [C] [D]

Sample Reading Comprehension

6. [A] [B] [C] [D]
7. [A] [B] [C] [D]
8. [A] [B] [C] [D]

Sample Test Answer Key

Algebra and Functions

1. B
2. A
3. C
4. A
5. C

Reading Comprehension

6. C
7. D
8. C

NJATC Courses and Careers

The National Joint Apprenticeship and Training Committee for the Electrical Industry offers registered apprenticeship programs for: Inside Wireman, Residential Wireman, Outside Lineman and TeleCommunications (VDV) Installer/Technician. The NJATC also produces numerous training materials that are available to you. A variety of formats are utilized, including: Reference Text and Student Workbook, Computer Based Training (CBT), On-Line Class and Reference Text.

Some of the Subjects currently available include:

*Direct Current Theory**	*Alternating Current Theory**
*Tech Math**	*Semiconductor Electronics**
*Digital Electronics**	*Programmable Logic Controllers*
*Fundamentals of Instrumentation**	*Industrial Motor Control*
Significant Changes to the NEC®—2002	*Applied Codeology*
Code Calculations	*Electrical Grounding*
OSHA 10 Hour	*OSHA 30 Hour*

*CBT COURSE AVAILABLE

Materials vary in price, depending on the course title and the format selected. All CBTs are $99.00 (price does not include text). For additional information on ordering these materials, please contact the IBEW-NECA Joint Apprenticeship and Training office nearest to you. You may also write to: NJATC, 301 Prince George's Blvd., Suite D, Upper Marlboro 20774, or visit our website at www.njatc.org. At the website you will find a listing of all IBEW-NECA apprenticeship offices—simply click on *JATC Directory*. Our new on-line Tech Math course can be accessed at www.njatc.utk.edu. We also have a recruitment CD available entitled *Careers in the Electrical-Electronic Industry* ($10).

We wish you well in your career pursuits.

IBEW - International Brotherhood of Electrical Workers NECA - National Electrical Contractors Association

Training over 50,000 Registered Apprentices Annually
75,000 Journeymen Attending Skill Improvement Classes
Investing over 125 Million Dollars a Year in Training
Earn over a $100,000.00 During Your Apprenticeship

"Earn While You Learn"

Work in the Electrical Industry is ...

DEMANDING

INTERESTING

DANGEROUS

EXCITING

MOBILE

FUN

DIRTY

SEASONAL

REWARDING

EXHAUSTING

CHALLENGING

ALL OF THE ABOVE

Notes

Notes

WHEN SEARCHING FOR A CAREER...

Always inquire about health insurance, pensions, and other benefits, as well as wage structure.

Be sure to differentiate between what is "fact" and what is "promised." Promises don't pay doctor bills, make car payments, or cover the rent – wages and benefits do! Some things, that may not seem that important today, will eventually be extremely important to every working man and woman in this country.

Things I Need To Do To Complete My Application

- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____