

# SKAT Electrical Test

## Study Guide

### Overview

This study guide is designed to familiarize you with the basic knowledge and skills required by Georgia Power Company's Apprentice Electrician and Apprentice Rotating Equipment Repairman positions and what is covered on the SKAT Electrical test. The content covered in the SKAT Electrical test was identified by Georgia Power Company's job experts as critical for new hires in these positions.

The SKAT Electrical test includes four sections:

#### **Electrical Knowledge**

- Symbols and formulas
- Direct current—series and parallel
- Wiring diagrams
- Transformers
- Troubleshooting
- Alternating current

#### **Hand Tools and Power Tools**

- Identify basic hand tools and their applications

#### **Rule Reading**

- Reading standard measurements
- Making measurement calculations

#### **Tools and Precision Measurement**

- Types of basic tools and their applications
- Standard and Vernier scaled precision measuring tools

Each section contains questions that emphasize the understanding of the subjects along with the ability to apply the knowledge. The test is multiple choice. Some questions refer to figures containing diagrams, schematics, drawings, and charts. The test will last approximately two hours. Some questions require calculations. Calculators are permitted and will be provided along with a formula sheet.

The SKAT Test includes several different types of test questions. The types of questions include the following:

- **Terms and definitions:** These questions ask for the definition of a term, the name for a concept or device, or characteristics of a component.
- **Relationships and Principles:** These questions ask how two concepts or measurements relate to each other.
- **Interpreting Facts:** For these questions, a situation or problem you might face on the job will be described and the answer that describes what is happening or what is wrong must be selected.
- **Calculating Values:** These questions require the calculation of amounts, measurements, or electrical values given specific information.
- **How-To:** These questions ask how to perform a job-related task or specific activity.
- **Understanding and applying concepts:** These questions ask you to demonstrate your understanding of job-related concepts and how those concepts may be applied on the job.

## Sample Questions

### Electrical Knowledge

A charged atom is known as a/an:

- a. **Ion**
- b. Proton
- c. Neutron
- d. Quark

Materials which permit the flow of electrons are referred to as:

- a. Resistors
- b. **Conductors**
- c. Transmitters
- d. Switches

What is the purpose of a switch in a circuit:

- a. **Interrupt the flow of electricity**
- b. Detects a fault on a circuit
- c. The path of least resistance
- d. Provides a ground for a circuit

### Hand Tools and Power Tools

This section consists of identifying basic hand tools and devices used in construction, maintenance, and repair.

The tool pictured on the right is/are a:

- a. Wire snips
- b. Insulated cutter
- c. **Wire strippers/cutters**
- d. Needle nose pliers



### Rule Reading

This section consists of reading a standard measuring tape or ruler and making measurement calculations.

Look at the sample rulers below. Add or subtract the measurements indicated by arrows pointing to specific locations on the segments. After converting these measurements, convert the total measurement to feet and inches then mark the correct answer.

- a. 1' 2"
- b. 1' 3"
- c. 1' 4"
- d. **1' 6"**

Answer:  $13'' + 5'' = 18''$   
or 1' 6"



### Tools and Precision Measurement

This section consists of instrument knowledge including basic tool types, tool applications, Standard/Vernier scaled precision measuring tools.

Identify the type of micrometer below:

- a. Inside micrometer
- b. Digital caliper
- c. Drafting compass
- d. **Outside micrometer**

