WHY DO AT&T AND ITS AFFILIATES TEST?

When individuals are being considered for our available job openings, they go through a selection process to measure their skills and abilities to determine if they can perform the jobs in a satisfactory manner. It is to the advantage of both you, as a job candidate, and the company that only those who can perform at acceptable levels be placed on the job. Research has shown that tests provide accurate measures of people’s skills and abilities and, therefore, we use tests to help identify people best suited for our job openings.

WHAT IS THE TECHNICAL KNOWLEDGE TEST (TKT)?

The TKT is designed to measure an individual's knowledge of technical concepts required to perform certain technical jobs. There are no study materials provided. Knowledge must be acquired prior to testing.

The technical concepts fall into the following five categories:

- Basic Electricity
- Basic Electronics
- Electronic Devices
- Fundamentals of Transmission
- Computer Principles

These concepts are generic; that is, they apply to all fields of electricity and electronics and not only to the telecommunications industry. The following 45 technical concepts are covered in the test:

- Voltage
- Attenuators
- Computers
- Series and Parallel Circuits
- DC Ammeter
- Transistors and Semiconductors
- Batteries
- Speech Characteristics
- Inverters
- Electrostatic Discharge
- Analog Signal Measuring Devices
- Amplifiers
- AC Measuring Devices
- Resistance and Impedance
- Voltmeter
- Data Communications
- Inductors
- Logic Probes
- Converters
- Opto-Isolators
- Units of Measure
- DC Measuring Devices
- Alternating Current (AC)
- Oscilloscope
- Computer Software
- Transformers
- Numbering Systems
- Relays
- Transducers
- Digital System Transmission
- Generators and Alternators
- Direct Current (DC)
- Oscillators
- Computer Architecture
- Filters
- Flowcharting
- Wire
- Transistors and Diodes
- Analog System Transmission
- Rectifiers
- Digital Signal Measuring Devices

The TKT consists of two modules, the General Knowledge and the Applied Knowledge Modules and takes 2 hours and 50 minutes to complete. You must qualify on the General Knowledge Module in order to test on the Applied Knowledge Module.

GENERAL KNOWLEDGE

This module assesses your knowledge and understanding of technical terms and their definitions and recognition of technical symbols. There are four possible answers for each item; answer options are labeled A, B, C, and D. There is only one correct answer for each item.
You will have 50 minutes to answer 45 items. Below are some sample questions:

1. AC current flow in a conductor creates a magnetic field around that conductor. This field is capable of:
   A. creating resistance in an adjacent copper conductor
   B. creating additional AC capacitance associated with an adjacent copper conductor
   C. improving the conductivity of an adjacent copper conductor
   D. inducing current flow in an adjacent copper conductor

   The correct answer is D.

2. A device that has a conductive quality that may be used to limit (but not block) DC current flow in an electric circuit is known as a(an):
   A. capacitor
   B. inductor
   C. resistor
   D. transformer

   The correct answer is C.

3. Combined modulating and demodulating circuits in one unit is designated as a:
   A. muldem
   B. multiplexer
   C. modem
   D. modulator

   The correct answer is C.

APPLIED KNOWLEDGE

In this module of the test you are required to apply your knowledge to a given situation. You will primarily be working with circuit diagrams. The test is multiple-choice. There will be four possible answers for each item, answer options are labeled A, B, C and D. There is only one correct answer for each item.

A calculator and formula card will be provided as test aids. You are permitted to use your own calculator if you so desire.

You will have 2 hours to answer 55 items. Below are some sample questions:

1. In the illustration, resistance R4 is defective and must be replaced. In order for the bridge to be balanced (the voltmeter reading equal to zero volts across Points A and B), the replacement resistor must have what value?

   ![Circuit Diagram](image)

   A. 40 ohms
   B. 50 ohms
   C. 70 ohms
   D. 120 ohms

   The correct answer is D.
2. The transformer T1 in the illustration below has a primary winding with 680 turns. The secondary winding has 40 turns. The input voltage is 110 volts AC. Assuming an ideal transformer (no resistive losses, no saturation, etc.), what is the output voltage?

A. 6.47 volts AC  
B. 18.70 volts AC  
C. 647 volts AC  
D. 1870 volts AC

The correct answer is A.

**WHAT CAN I DO TO PREPARE FOR THE TEST?**

As illustrated, the TKT requires specific technical knowledge. Acquiring this knowledge through coursework or independent study is the best way to prepare to take the test. Keep in mind, however, that completion of coursework or independent study will not guarantee that you will pass the test. **It is important that you have an understanding of the material presented in the course or obtained through independent study.**

When you are scheduled for the TKT, you will be given a specific time to report to the testing location. Try to arrive at the location at least 15 minutes before your scheduled test time to give yourself time to relax before the test begins. Review this Test Information Pamphlet and be prepared for the test by bringing your glasses, etc. Ask questions before the test begins and be sure you understand the format of the TKT.

**FOR EMPLOYEES ONLY:** You may contact the AT&T Self Development Resource Center located on HROneStop at [http://hronestop.att.com](http://hronestop.att.com) >> Your Career >> Self Development >> Test Preparation to inquire about study guides, textbooks, and/or general course information that may help you prepare for the test.

**WHAT CAN I DO TO PERFORM MY BEST ON THE TEST?**

1. Read questions carefully.  
2. Think - reason out your answer.  
3. Answer questions you are sure of first.  
4. Reject immediately those answers you know are incorrect.  
5. Don't change your answers unless an obvious mistake has been detected.  
6. Be aware of the time (make a mental note of the time when the test begins and pace yourself accordingly).
RETEST INTERVALS

If it should happen that you do not qualify on the TKT, you may retest at one-year intervals. Please note that you will be tested on both modules upon retest. Test standards are periodically updated to reflect current abilities and skills required for our jobs. Therefore, it may be necessary to meet new test standards should they be introduced prior to your placement on the job.

SUMMARY

Successful completion of the TKT qualifies you for possible placement into jobs requiring the test. Additional testing may be required for certain positions. See job briefs in your area for additional testing requirements for titles you are interested in.

AT&T and its affiliates support and comply with the provisions of the Americans with Disabilities Act (ADA) and other Federal and State laws that specifically assist individuals with disabilities. If you have a limiting disability and need special testing arrangements, please ask your local Employment Office or Placement Bureau personnel for information about the testing accommodation process.