

TRIZ ASSOCIATE CERTIFICATION - Administration and content

Prerequisites

- None

Recommendations for passing the test

- Applicant should have a good theoretical knowledge of all Examination Topics listed below.
- Having some experience in practical application of TRIZ methods will be advantageous.

Admission to the test:

- Applicant should have a current picture ID and have preregistered to take the test

Examination Topics

I. Function Analysis

- Definition of function
- Function types: main, auxiliary
- Useful, harmful, adequate, inadequate (insufficient, excessive) functions
- Concept of ideality
- Ideal engineering system
- Trimming
 - Concept of trimming
 - Rules of trimming (ideal ways, ideality tactics)

II. Problem Modeling and Problem Solving

1. Modeling problems as engineering contradictions (technical contradictions, system conflicts)

- Definition of an engineering contradiction
- Typical engineering contradictions
- 39 typical parameters
- Altshuller's (Contradiction) Matrix
- 40 Inventive Principles

2. Modeling problems as physical contradictions

- Definition of a physical contradiction
- Methods of resolving physical contradictions

III. Laws (Trends/Patterns) of Engineering System Evolution¹

- Law of Increasing Ideality
- Law of Non-Uniform System Development
- Law of Transition to Supersystems
- Law of Increasing Dynamization
- Law of Transition to Microlevels
- Law of System Completeness

¹ Basic knowledge of the laws/trends/patterns of evolution will be tested: what these laws/trends/patterns are, and what evolutionary developments they imply.

- Law of Increasing Coordination (Harmonization)
- Law of Shortening of Flow Paths
- S-curve Evolution

Open-book, multiple-choice

No computers allowed – any TRIZ book or training material is allowed.

A test contains 6-8 problems divided into 3 groups:

- Function analysis
- Resolving conflicts/contradictions
- Laws (trends/patterns) of evolution.

Passing final grade – 75%. All tests will be graded by members of the TRIZ Certification Board. All grades will then be averaged to obtain the final grade.

Test Administration

Test will be administered at a designated location and dates as published on the AI website as required.

Test will be proctored by a member of or by a person assigned by the Certification Board.

Duration of test is up to 4 hours.

Test Results

Test results will be available within fourteen business days (excluding holidays) after the test date. Grade attained will be sent to each participant. Those who pass will also be sent a certificate.

Application and Fee

Please register for the Associate Test using the registration form. The fee is \$150 USD.

If you fail the exam and wish to retake it, a new fee will be required. Click here for the [Application](#).

Recommended References

Altshuller, G.S. (1988). Creativity as an Exact Science, New York: Gordon and Breach.

Altshuller, G.S. (1999). The Innovation Algorithm, Worcester, MA: Technical Innovation Center.

Fey, V., Rivin, E. (2005). Innovation on Demand: A New Product Development Using TRIZ, Cambridge: Cambridge University Press.

Mann, D. (2002). Hands-on Systematic Innovation, CREAX Press.

Rantanen, K., Domb, E. (2002). Simplified TRIZ: New Problem-Solving Applications for Engineers and Manufacturing Professionals, Boca Raton, FL: CRC Press.

Terninko, J. Zusman, A., Zlotin, B. (1998). Systematic Innovation: An Introduction to TRIZ (Theory of Inventive Problem Solving), Boca Raton, FL: CRC Press.

Royzen, Z. (2008). Designing and Manufacturing Better Products Faster Using TRIZ, TRIZ Consulting, Inc., Seattle.

Salamatov, Y. (1999). TRIZ: The Right Solution at the Right Time: A Guide to Innovative Problem Solving, Insytex B.V., The Netherlands, 1999.

Altshuller, G., Zlotin, B., Zusman, A., Philatov, V. (1999) Tools of Classical TRIZ, Ideation International Inc.

Altshuller, G.S. (1995). And Suddenly the Inventor Appeared, Worcester, MA: Technical Innovation Center