



Inspection & Testing of Water-Based Systems

Level II Content Outline

(Updated Exam Released June 2, 2025)

Associate Engineering Technician

The candidates for NICET certification at Level II in Inspection & Testing of Water-Based Systems should have the knowledge, experience, and basic skills needed to work in the industry. Under limited supervision, they inspect, test, and maintain wet and dry systems, standpipes, fire pumps, private service mains, and water tanks. They verify that the system and components in place are reasonably operable as installed and document results for the responsible party. Level II technicians have at least 2 years of experience in water-based systems.

2.1 Safety

(Questions related to these tasks make up 5-15% of the exam.)

- 2.1.1 Implement proper use and maintenance of required PPE.^{1, 2, 6}
- 2.1.2 Implement lockout/tagout. ^{2, 6}
- 2.1.3 Address work hazards and implement procedures (e.g., confined spaces, holes, lighting, ceilings, ladders, and lifts). ^{2, 6}
- 2.1.4 Ensure ladder safety and proper use. ^{2, 6, 7}
- 2.1.5 Verify correct tools and equipment are used and maintained. ^{2, 4, 6}
- 2.1.6 Implement safety impairment procedures. ²

2.2 Communication

(Questions related to these tasks make up 5-15% of the exam.)

- 2.2.1 Coordinate with customers (e.g., pre-inspection reviews, review scope of work, and notifications). ²
- 2.2.2 Verify that alarm companies, owner, and AHJs are contacted for testing/maintenance purposes. ^{2, 3}
- 2.2.3 Document results/findings of ITM tasks to the customer/applicable party. ²

2.3 Perform, Document, and Interpret Intermediate ITM Tasks

(Questions related to these tasks make up 30-40% of the exam.)

- 2.3.1 Perform ITM tasks for dry systems (e.g., QODs, air compressors, nitrogen generators, and air maintenance devices). ^{2, 5}
- 2.3.2 Perform ITM tasks for wet systems (including antifreeze systems and automatic air vents). ²
- 2.3.3 Perform ITM tasks for standpipe systems. ^{2, 3}
- 2.3.4 Identify and classify ITM deficiencies and impairment handling (critical, non-critical, and impaired) ²

2.4 Perform, Document, and Interpret ITM Tasks for Water Supplies

(Questions related to these tasks make up 25-35% of the exam.)

- 2.4.1 Perform ITM tasks for fire pump systems. ^{1, 2, 3}
- 2.4.2 Perform ITM tasks for private fire service mains. ^{2, 4}
- 2.4.3 Perform ITM tasks for water storage tanks. ²

2.5 Internal Obstruction Investigation

(Questions related to these tasks make up 10-20% of the exam.)

- 2.5.1 Determine the need for obstruction investigations and prevention. ²
- 2.5.2 Perform assessments of the internal conditions of piping (including documenting). ²