



Inspection & Testing of Water-Based Systems

Level I Content Outline

Technician Trainee

The candidates for NICET certification at Level I in Inspection & Testing of Water-Based Systems should have the knowledge, experience and basic skills needed to work in the industry. Under the direct supervision of a qualified technician, they assist in the inspection and testing of water-based systems. Level I technicians have at least 6 months of experience in water-based systems.

1.1 Safety

(Questions related to these tasks make up 9-19% of the exam.)

- 1.1.1 Wear and maintain required PPE 1, 2
- 1.1.2 Recognize lockout/tagout (mechanical and electrical) 2
- 1.1.3 Recognize hazards (e.g., confined spaces, holes, lighting, ceilings, ladders, lift) 1, 2
- 1.1.4 Climb ladders 2
- 1.1.5 Inspect and maintain tools, equipment, and GFCI 1, 2, 3
- 1.1.6 Recognize impairment issues 1

1.2 Identify Components, Condition, and Operation

(Questions related to these tasks make up 35-45% of the exam.)

- 1.2.1 Locate and read gauges 1, 3
- 1.2.2 Locate and identify control valves and signage 1
- 1.2.3 Locate and identify drain and test valves and signage 1, 3
- 1.2.4 Visually inspect components for damage and leaks (e.g., pipe, hangers, bracing, sprinklers, fittings, FDC, and hose connections) 1, 3
- 1.2.5 Confirm indicator position of control valve 1, 3
- 1.2.6 Locate and identify electronic and mechanical alarm and supervisory devices 1, 3
- 1.2.7 Identify system types (e.g., wet, dry, or standpipe) 1, 3
- 1.2.8 Verify presence of fire pumps 1, 4
- 1.2.9 Identify water supply (e.g., fire pumps, tanks, municipal supply) 1
- 1.2.10 Verify trouble, supervisory, and alarm signals 1

1.3 Prepare Preliminary Documentation

(Questions related to these tasks make up 11-21% of the exam.)

- 1.3.1 Identify correct reports for ITM tasks 1
- 1.3.2 Inventory system components 1
- 1.3.3 Record size, make, type, and model of sprinklers and valves 1, 3
- 1.3.4 Prepare preliminary reports under direction of Level II or III technicians 1

1.4 Operate Components Under Direct Supervision

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

- 1.4.1 Fully exercise control valves (e.g., OS&Ys, PIVs, WPIVs, and butterfly valves) 1
- 1.4.2 Test water flow alarm (e.g., water motor gong, pressure switch, and vane-type) 1
- 1.4.3 Perform main drain test 1, 3
- 1.4.4 Flush hydrants 1, 3
- 1.4.5 Operate hose connections 1
- 1.4.6 Test electronic valve supervisory devices 1