

Effective Leakage and Pressure Management

FINAL ASSESSMENT

The test pool is comprised of 20 to 30 questions, participants receive 10 questions that are randomly selected. They have three tries to pass the test and must have a 70% passing score to be able to print a certificate.

Question 01: Pick One

TRUE or FALSE: All water distribution systems have leakage.

Points	Choices
10	True
0	False

Question 02: Pick One

Which of the below leakage types is hidden leakage that can be detected by acoustic leak detection?

Points	Choices
0	a. Background
0	b. Reported
10	C. Unreported

Question 03: Pick One

Water utilities that wait until a leak or main break is reported and then repair it are practicing _____ leakage management.

Points	Choices
0	a. Proactive
10	b. Reactive

Question 04: Pick One

A significant leak in a distribution system will cause water pressure in the area affected by the leak to _____.

Points	Choices
10	a. Decrease
0	b. Increase

Question 05: Pick One

The component time periods in the life of a leak are labelled the A-L-R periods. The letter "A" stands for?

Points	Choices
0	a. Automatic
10	b. Awareness
0	c. Acoustic

Question 06: Pick One

What activity is considered the most traditional and fundamental activity in a leakage management program?

Points	Choices
0	a. Pressure Management
0	b. Water Main Replacement
10	c. Acoustic Leak Detection

Question 07: Pick One

Conducting acoustic leak detection on plastic piping is inherently _____ conducting acoustic leak detection on metallic piping.

Points	Choices
0	a. Easier than
10	b. More challenging than
0	c. About the same effectiveness as

Question 08: Pick One

Acoustic leak detection relies upon sounding to detect individual leaks. The use of District Metered Areas (DMA) relies upon _____ to alert operators to newly emerging leaks or increasing leakage rates.

Points	Choices
0	a. Water quality sampling
10	b. Flow measurement
0	c. Pipeline replacement

Question 09: Pick One

The greatest number of leak events in most utilities (and annual water volume lost to leakage) result from leakage on _____.

Points	Choices
0	a. Water mains
10	b. Customer service lines
0	c. Fire hydrants

Question 10: Pick One

The most common way to place a value on leakage is to apply the VPC. What does the letter "V" in VPC stand for?

Points	Choices
0	a. Viscosity
0	b. Velocity
10	c. Variable

Question 11: Pick One

The two most important variable costs using in calculating the VPC are:

Points	Choices
0	a. Employee salaries and fringe benefits
10	b. Water treatment chemicals and electric power for pumping
0	c. Acoustic leak detection equipment and repair clamps

Question 12: Pick One

TRUE or FALSE: The VPC should include employee salaries as part of the costs?

Points	Choices
0	a. True
10	b. False

Question 13: Pick One

Which of the below equipment automates the acoustic leak detection process?

Points	Choices
10	a. Leak Noise Loggers
0	b. Geophones
0	c. Leak correlator

Question 14: Pick One

What is the name of the method of closing valves in an area of the water distribution system to observe a drop in flow attributed to a leak – a method used to localize the leak?

Points	Choices
0	a. Listening survey
0	b. Leak correlation
10	c. Step testing

Question 15: Pick One

What is the primary reason why pressure levels vary in water distribution systems?

Points	Choices
0	a. Some areas of the system require higher pressure for fire protection
0	b. A portion of piping is deteriorated and can only withstand low pressure
10	c. Ground elevations vary

Question 16: Pick One

The form of pressure management using a Pressure Reducing Valve (PRV) to vary the outlet water pressure based upon the flow measured into the pressure management area is known as _____.

Points	Choices
0	a. Time Based Control
10	b. Flow Modulated Control
0	c. Fixed Outlet Control

Question 17: Pick One

One pound-per-square inch of water pressure is exerted by water in a column that is _____ feet tall.

Points	Choices
0	a. 0.43 feet
0	b. 1.0 feet
10	c. 2.31 feet

Question 18: Pick One

Background leakage is _____ sensitive to pressure levels and changing pressure than unreported leaks.

Points	Choices
0	a. Less
10	b. More
0	c. Similarly

Question 19: Pick One

TRUE or FALSE: Left unchecked, new leakage is always going to occur in water distribution systems.

Points	Choices
10	a. True
0	b. False

Question 20: Pick One

TRUE or FALSE: Water distribution system piping will last forever and never needs to be rehabilitated or replaced.

Points	Choices
0	a. True
10	b. False