
Advanced Skill Certificate in Hotel Maintenance and Engineering Management

Plumbing Systems and Maintenance

A

1. Air Gap:

- Related Terms: Backflow prevention
- Air gap is a physical separation between the water outlet and the flood level of a fixture, appliance, or device to prevent backflow contamination. It ensures that any wastewater cannot flow back into the clean water supply.

2. Angle Stop:

- Related Terms: Shut-off valve, Supply stop
- An angle stop is a type of shut-off valve located under sinks and toilets that controls the flow of water to the fixture. It is usually connected to the water supply line and can be turned off in case of repairs or emergencies.

3. Auger:

- Related Terms: Drain snake, Plumbing snake
- An auger is a plumbing tool used to clear clogs in drains and pipes. It consists of a flexible cable with a corkscrew-like tip that can be inserted into the pipe to break up blockages and allow water to flow freely.

B

1. Backflow Prevention:

- Related Terms: Cross-connection, Check valve
- Backflow prevention is the practice of ensuring that contaminated water does not flow back into the clean water supply. This is typically achieved through the use of devices such as air gaps, check valves, and vacuum breakers.

2. Ball Valve:

- Related Terms: Quarter-turn valve, Shut-off valve
- A ball valve is a type of shut-off valve that uses a ball with a hole in the middle to control the flow of water. When the handle is turned, the ball rotates to either allow or stop the flow of water.

3. Bidet:

- Related Terms: Personal hygiene, Fixture
- A bidet is a plumbing fixture used for personal hygiene, particularly after using the toilet. It typically features a spray nozzle that cleans the user's private areas with water, promoting cleanliness and comfort.

C

1. Check Valve:

- Related Terms: Non-return valve, Backflow prevention
- A check valve is a device that allows water to flow in only one direction. It prevents backflow by closing automatically when water tries to flow in the opposite direction, ensuring that the water supply remains clean and uncontaminated.

2. Cleanout:

- Related Terms: Access point, Sewer line
- A cleanout is a pipe fitting with a removable cap that provides access to a sewer line for cleaning and maintenance purposes. It allows plumbers to remove blockages and inspect the pipe for any issues.

3. Compression Fitting:

- Related Terms: Pipe joint, Connection
- A compression fitting is a type of pipe joint that connects two pipes or a pipe and a fixture by compressing a ring or ferrule around the pipe. This creates a watertight seal without the need for soldering or welding.

D

1. Drain Snake:

- Related Terms: Auger, Plumbing snake
- A drain snake is a flexible tool used to clear clogs in drains and pipes. It can be manually or mechanically operated and is inserted into the pipe to break up blockages and restore proper drainage.

2. Drip Irrigation:

- Related Terms: Water conservation, Irrigation system
- Drip irrigation is a method of watering plants by delivering water directly to the root zone through a network of tubing and emitters. It helps conserve water by reducing evaporation and runoff.

E

1. Elbow Fitting:

- Related Terms: Angle fitting, Pipe joint
- An elbow fitting is a type of pipe joint that allows pipes to change direction at a specific angle. It is commonly used to navigate around obstacles or connect pipes in tight spaces.

2. Expansion Tank:

- Related Terms: Pressure relief valve, Hot water system
- An expansion tank is a device used in hot water systems to accommodate the expansion of water when it is heated. It helps prevent pressure build-up in the system and ensures the safety and efficiency of the

water heater.

F

1. Fixture:

- Related Terms: Sink, Toilet, Bidet
- A fixture is a device connected to a plumbing system that provides a specific function, such as a sink, toilet, or shower. Fixtures are essential components of a building's plumbing infrastructure.

2. Float Valve:

- Related Terms: Fill valve, Toilet tank
- A float valve is a mechanism used in toilet tanks to regulate the water level. It consists of a float that rises and falls with the water level, triggering the valve to open or close and maintain the desired water level.

G

1. Grease Trap:

- Related Terms: Interceptor, Restaurant kitchen
- A grease trap is a plumbing device used in commercial kitchens to intercept grease and solids before they enter the wastewater system. It helps prevent clogs and contamination in the plumbing system.

H

1. Hose Bib:

- Related Terms: Outdoor faucet, Water spigot
- A hose bib is an outdoor faucet used to connect hoses for gardening, washing cars, and other outdoor activities. It is typically located on the exterior of a building and has a threaded outlet for hose attachment.

2. Hydrojetting:

- Related Terms: High-pressure cleaning, Drain cleaning
- Hydrojetting is a method of drain cleaning that uses high-pressure water jets to remove blockages and debris from pipes. It is an effective and environmentally friendly way to clear clogs and restore proper drainage.

I

1. In-line Check Valve:

- Related Terms: Check valve, Backflow prevention
- An in-line check valve is a type of valve that allows water to flow in only one direction. It is installed in a pipe to prevent backflow and ensure that water flows in the intended direction without contamination.

2. Insulation:

- Related Terms: Pipe protection, Energy efficiency
- Insulation is a material used to wrap pipes and water heaters to prevent heat loss and freezing. It helps maintain water temperature, reduce energy costs, and protect the plumbing system from cold weather damage.

J

1. Jet Flush:

- Related Terms: Toilet, Water pressure
- Jet flush is a feature in toilets that uses high-pressure water jets to clean and flush waste from the bowl. It provides a powerful and efficient flush, ensuring that the toilet remains clean and hygienic.

K

1. Krausen:

- Related Terms: Brewing, Fermentation
- Krausen is the foamy head that forms on top of fermenting beer. It consists of yeast, proteins, and other compounds that rise to the surface during the fermentation process, indicating that the yeast is active and producing alcohol.

L

1. Leak Detection:

- Related Terms: Water damage, Plumbing repair
- Leak detection is the process of identifying and locating leaks in a plumbing system. It involves using specialized equipment and techniques to detect hidden leaks behind walls, under floors, or in other hard-to-reach areas.

2. Low-Flow Fixtures:

- Related Terms: Water conservation, Faucet, Showerhead
- Low-flow fixtures are plumbing fixtures designed to reduce water consumption by limiting the flow rate. They include faucets, showerheads, and toilets that help conserve water without sacrificing performance.

M

1. Manifold System:

- Related Terms: PEX piping, Distribution system
- A manifold system is a plumbing configuration that uses a central distribution point to supply water to multiple fixtures. It is commonly used with PEX piping to create efficient and flexible plumbing layouts.

2. Mixing Valve:

- Related Terms: Temperature control, Shower valve
- A mixing valve is a device that blends hot and cold water to achieve a desired temperature. It is

commonly used in showers and faucets to prevent scalding and ensure a consistent water temperature.

N

1. Non-potable Water:

- Related Terms: Greywater, Reclaimed water
- Non-potable water is water that is not suitable for drinking but can be used for other purposes such as irrigation, flushing toilets, and industrial processes. It helps conserve fresh water and reduce wastewater generation.

2. Nozzle:

- Related Terms: Spray head, Watering, Cleaning
- A nozzle is a device attached to the end of a hose or pipe that controls the direction and flow of water. It can be adjusted to create different spray patterns for watering plants, cleaning surfaces, or other applications.

O

1. Overflow Drain:

- Related Terms: Bathtub, Sink, Drainage system
- An overflow drain is a feature in bathtubs and sinks that prevents water from overflowing. It is located near the top of the fixture and allows excess water to drain out if the main drain becomes blocked or clogged.

2. Outdoor Shower:

- Related Terms: Pool area, Beach, Camping
- An outdoor shower is a fixture located outside the building that provides a convenient way to rinse off after swimming, gardening, or other outdoor activities. It is commonly found near pools, beaches, and camping sites.

P

1. P-trap:

- Related Terms: Drain, Trap seal
- A P-trap is a U-shaped pipe located under sinks and drains that traps water to prevent sewer gases from entering the building. It creates a seal that blocks odors and maintains proper drainage in the plumbing system.

2. Pressure Regulator:

- Related Terms: Water pressure, Valve
- A pressure regulator is a device used to control and reduce the water pressure in a plumbing system. It ensures that the pressure remains within a safe range to prevent damage to pipes, fixtures, and appliances.

Q

1. Quick Connect Fitting:

- Related Terms: Push-to-connect, Pipe joint
- A quick connect fitting is a type of pipe joint that allows pipes to be easily connected and disconnected without the need for tools or soldering. It is commonly used in plumbing systems for quick and convenient installation.

R

1. Rainwater Harvesting:

- Related Terms: Water conservation, Collection system
- Rainwater harvesting is the practice of collecting and storing rainwater for later use. It helps reduce water consumption, lower utility bills, and provide a sustainable source of water for irrigation and other purposes.

2. Relief Valve:

- Related Terms: Pressure relief, Safety valve
- A relief valve is a safety device that automatically releases pressure from a system to prevent damage or failure. It is commonly used in water heaters, boilers, and other plumbing systems to protect against overpressure conditions.

S

1. Siphon Jet Toilet:

- Related Terms: Flushing mechanism, Toilet bowl
- A siphon jet toilet is a type of toilet that uses a powerful jet of water to create a siphon effect and remove waste from the bowl. It provides an efficient and thorough flush, ensuring that the toilet remains clean and odor-free.

2. Sump Pump:

- Related Terms: Basement, Water removal
- A sump pump is a device used to remove excess water from basements and crawl spaces. It is typically installed in a sump pit and activated by a float switch to pump water outside and prevent flooding.

T

1. Tap:

- Related Terms: Faucet, Water flow
- A tap is a device used to control the flow of water from a pipe. It is commonly known as a faucet in the United States and is used in sinks, showers, and other plumbing fixtures to release water for various purposes.

2. Temperature and Pressure Relief Valve (TPR Valve):

- Related Terms: Pressure relief, Safety valve
- A temperature and pressure relief valve is a safety device installed on water heaters to release excess pressure and temperature. It prevents the tank from exploding in case of overheating or overpressurization.

U

1. Urinal:

- Related Terms: Men's restroom, Flushing mechanism
- A urinal is a plumbing fixture used for urination, commonly found in men's restrooms. It is designed to be water-efficient and hygienic, with various flushing mechanisms such as manual, automatic, or waterless.

V

1. Vacuum Breaker:

- Related Terms: Backflow prevention, Hose bib
- A vacuum breaker is a device that prevents backflow by creating a siphon break in the plumbing system. It is commonly used on outdoor faucets, hose bibs, and irrigation systems to protect the water supply from contamination.

2. Vent Stack:

- Related Terms: Ventilation, Drainage system
- A vent stack is a vertical pipe that allows air to enter the plumbing system to equalize pressure and prevent siphoning. It helps maintain proper drainage and prevent sewer gases from escaping into the building.

W

1. Water Hammer:

- Related Terms: Water pressure, Pipes
- Water hammer is a phenomenon that occurs when the flow of water is suddenly stopped or redirected, causing a loud banging noise in the pipes. It can lead to damage and should be addressed by installing water hammer arrestors.

2. Water Softener:

- Related Terms: Hard water, Ion exchange
- A water softener is a device that removes minerals such as calcium and magnesium from hard water through ion exchange. It helps prevent scale buildup, improve water quality, and extend the lifespan of plumbing fixtures and appliances.