Maine Journeyman Plumbing Practice Exam (Sample)

Study Guide

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Questions

1. What is the maximum allowable angle for a cleanout in a plumbing system?

- **A. Not more than 90 degrees**
- **B. Not more than 45 degrees**
- **C. Not more than 75 degrees**
- **D. Not more than 60 degrees**

2. What is the nature of a Combined Sewer System?

- **A. Only storm water is collected**
- **B. Only wastewater is treated**
- **C. Combined Sewer and Storm Water that all goes to Municipal Wastewater Facility**
- **D. Separate systems for sewer and storm water**

3. What is the typical pump depth range for a shallow well?

- **A. 15' to 25'**
- **B. 25' to 35'**
- **C. 35' to 45'**
- **D. 45' to 55'**

4. Which type of toilet is best suited for residential applications?

- **A. Elongated Toilet**
- **B. Round Toilet**
- **C. Dual Flush Toilet**
- **D. Pressure-Assisted Toilet**

5. What specific design does a circuit vent serve?

- **A. Individual fixture venting**
- **B. Battery venting**
- **C. Combined sewer and venting**
- **D. General plumbing systems**

6. What does a trap primer do in plumbing systems?

- **A. It eliminates air from the pipes**
- **B. It retains heat in the plumbing**
- **C. It introduces water to maintain a seal in a trap**
- **D. It filters out contaminants from the water**

7. What is the primary reason for installing a vent system in plumbing?

- **A. To remove excess heat from the plumbing system**
- **B. To allow air to enter the plumbing system to prevent vacuum formation**
- **C. To ensure all water is heated evenly**
- **D. To filter contaminants in the water supply**

8. What is the primary function of a branch vent?

- **A. To provide drainage for stormwater**
- **B. To vent specific fixtures and maintain air pressure**
- **C. To connect to the main sewer line**
- **D. To filter out contaminants from water**

9. Upon noticing a water leak, what is the proper first step to take?

- **A. Contact a plumbing professional**
- **B. Turn off the water supply**
- **C. Try to patch it with tape**
- **D. Leave it as is to see if it worsens**

10. What is the required inch spread for a 3-hole lavatory faucet setup?

- **A. 2 inches**
- **B. 4 inches**
- **C. 6 inches**
- **D. 8 inches**

Answers

1. A
2. C
3. B
4. B
5. B
6. C
7. B
8. B
9. B
10. B

Explanations

1. What is the maximum allowable angle for a cleanout in a plumbing system?

A. Not more than 90 degrees

B. Not more than 45 degrees

C. Not more than 75 degrees

D. Not more than 60 degrees

A cleanout in a plumbing system is designed to allow for easy access to clean and maintain the drainage pipes. The maximum allowable angle for a cleanout fitting is critical for ensuring effective flow and minimizing the risk of blockages, as well as facilitating maintenance. The maximum allowable angle of not more than 90 degrees is established to ensure that even at a right angle, waste can effectively flow through the system without significant resistance. If the angle were to exceed this, it could create a situation where the flow of waste could be hindered, making it more difficult to clear clogs and increasing the possibility of backups in the plumbing system. This standard is essential for maintaining efficiency in wastewater transport and ensuring the longevity of the plumbing system. Proper installation of cleanouts at this angle ensures that they serve their purpose effectively in both residential and commercial plumbing systems.

2. What is the nature of a Combined Sewer System?

A. Only storm water is collected

B. Only wastewater is treated

C. Combined Sewer and Storm Water that all goes to Municipal Wastewater Facility

D. Separate systems for sewer and storm water

A Combined Sewer System is designed to handle both sewage and stormwater. This means that it collects wastewater from homes and businesses, as well as rainwater runoff, in a single piping system. During dry periods, this combined flow can usually be treated at a Municipal Wastewater Facility, where harmful contaminants are removed before the water is released back into the environment. The importance of this system lies in its ability to manage both types of water in areas where separating them would be impractical or too costly. However, during heavy rain events, the volume of water can sometimes exceed the system's capacity, leading to combined sewer overflows (CSOs), which can pose environmental challenges. Understanding this system reinforces the significance of municipal planning and infrastructure investment, particularly in urban areas, to ensure effective management of water resources.

3. What is the typical pump depth range for a shallow well?

A. 15' to 25'

B. 25' to 35'

C. 35' to 45'

D. 45' to 55'

The typical pump depth range for a shallow well is generally considered to be between 25 to 35 feet. Shallow wells are designed to draw water from relatively close to the surface, making them more accessible and easier to maintain than deeper wells. These wells typically tap into the water table, which is usually found at depths less than 35 feet in many geographic areas. Understanding the depth range is crucial for effective well installation and pump selection. If a pump is installed too deep for a shallow well, it may not function properly nor provide efficient water extraction. This specific depth range allows for optimal performance and longevity of the pump, ensuring that it can effectively deliver water without the risk of running dry or incurring damage from being submerged too deeply. In the context of the choices presented, other depth ranges provided are indicative of deep wells, which rely on submersible pumps designed for much greater depths and pressures. The shallow well range specifically reflects the unique characteristics and requirements of shallow well systems.

4. Which type of toilet is best suited for residential applications?

A. Elongated Toilet

B. Round Toilet

C. Dual Flush Toilet

D. Pressure-Assisted Toilet

In residential applications, the round toilet is often considered the most suitable option, particularly in smaller bathrooms or limited spaces. Round toilets are generally compact, which allows them to fit comfortably in tight quarters where elongation might be an issue. Additionally, they often come at a lower price point compared to elongated or pressure-assisted toilets, making them a budget-friendly choice for homeowners. Round toilets also provide a traditional design that many homeowners feel comfortable with and are easy to install and maintain. They can be particularly advantageous in children's bathrooms or guest bathrooms, where space optimization is essential. These toilets typically have a standard height and depth, making them easy for a wide variety of users. While elongated toilets provide more comfort and a larger seating area, their size may not be ideal for every bathroom layout. Dual flush toilets, while efficient in water conservation, may not always be the best choice for every household based on flushing habits. Pressure-assisted toilets can be beneficial for their powerful flushing capabilities but are often more suited for commercial applications due to their complexity and installation requirements.

5. What specific design does a circuit vent serve?

A. Individual fixture venting

B. Battery venting

C. Combined sewer and venting

D. General plumbing systems

The correct answer focuses on the specific design function of a circuit vent, which is intended to serve multiple plumbing fixtures connected to a single venting system. Circuit venting is a method used in plumbing that allows for the venting of several fixtures while minimizing the number of vents required. Circuit vents are typically used in systems where fixtures are located close together, often within the same bathroom or kitchen area. This type of venting provides ventilation for multiple fixtures, allowing for the free flow of air and gases, and preventing the siphoning of traps when water flows through the pipes. It serves a dual purpose: it alleviates pressure changes within the drainage system and ensures that the traps remain filled with water to block sewer gases effectively. This is distinct from other options. Individual fixture venting refers to venting that is dedicated to a single fixture, while combined sewer and venting would suggest a different system design, not focused specifically on circuit venting. General plumbing systems encompass a broader range of plumbing designs and do not specifically address the unique function that a circuit vent serves.

6. What does a trap primer do in plumbing systems?

A. It eliminates air from the pipes

B. It retains heat in the plumbing

C. It introduces water to maintain a seal in a trap

D. It filters out contaminants from the water

A trap primer is a specific device used in plumbing systems to introduce a small amount of water into a trap, which is essential for maintaining a water seal. This water seal prevents sewer gases from entering a building through the plumbing fixtures. Over time, traps can dry out due to evaporation, especially if the fixtures are not used frequently. The trap primer activates automatically, supplying necessary water to refill the trap and ensure the seal is intact. The introduction of water is crucial because, without it, the trap can lose its effectiveness, potentially allowing harmful gases into the living space. This aspect of maintaining a seal is essential for health and safety in plumbing systems, making the trap primer a vital component in installations where traps may be at risk of drying out.

7. What is the primary reason for installing a vent system in plumbing?

A. To remove excess heat from the plumbing system

B. To allow air to enter the plumbing system to prevent vacuum formation

C. To ensure all water is heated evenly

D. To filter contaminants in the water supply

The primary reason for installing a vent system in plumbing is to allow air to enter the plumbing system to prevent vacuum formation. Vent systems are crucial for the proper functioning of drainage systems. When water drains, it creates a negative pressure or vacuum within the piping system, which can lead to slow drainage or even siphoning of water traps. By providing air access, the vent helps to equalize pressure within the system, allowing wastewater to flow freely and ensuring that traps remain filled with water to block sewer gases from entering the living space. This is essential for maintaining a healthy and functional plumbing system.

8. What is the primary function of a branch vent?

A. To provide drainage for stormwater

B. To vent specific fixtures and maintain air pressure

C. To connect to the main sewer line

D. To filter out contaminants from water

The primary function of a branch vent is to vent specific fixtures and maintain air pressure within the plumbing system. This is crucial because proper venting allows sewer gases to escape and prevents the buildup of pressure that could interfere with drainage. The branch vent serves to ensure that wastewater flows smoothly and efficiently through the system by equalizing pressure, which is vital for preventing siphoning of water from traps. This maintains the water seal in traps, which is important for blocking sewer gases from entering the living space. Proper venting is key in a plumbing system for maintaining functional efficiency and safety.

9. Upon noticing a water leak, what is the proper first step to take?

A. Contact a plumbing professional

B. Turn off the water supply

C. Try to patch it with tape

D. Leave it as is to see if it worsens

Turning off the water supply is the proper first step when noticing a water leak because it immediately stops the flow of water, thus minimizing damage to the property. This prevents further flooding and helps control the situation until a professional can assess and address the leak properly. Maintaining control over water flow is crucial in any leak scenario because it significantly mitigates the risk of water damage, mold growth, or structural issues that can arise from uncontrolled leaking. Once the water is turned off, it becomes safer to investigate the source of the leak and evaluate the necessary repairs, making it a foundational action that should be prioritized in any plumbing emergency. Addressing the leak in this manner sets up a clear path toward a more effective and less damaging response to the situation.

10. What is the required inch spread for a 3-hole lavatory faucet setup?

A. 2 inches

B. 4 inches

C. 6 inches

D. 8 inches

The required inch spread for a 3-hole lavatory faucet setup is 4 inches. This measurement is crucial for ensuring that the faucet properly fits the sink and aligns with the pre-drilled holes. A 4-inch spread indicates that the distance from the center of the hot water handle to the center of the cold water handle is 4 inches, which is a standard size for many lavatory faucets designed for single sink applications. This configuration allows for a compact design that fits well in smaller bathrooms or spaces where a full spread faucet might be too large. Other common spreads include 6 inches and 8 inches, which are typically used in more extensive setups or different faucets designed for larger sinks. However, the 4-inch spread is specifically designed for smaller, commonly found lavatory sink configurations, making it the standard answer for a 3-hole faucet setup in this context.