Septic License Practice Exam Sample Study Guide

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Featuring practice questions, answers, and explanations for each question.

Questions

1. What is the minimum storage capacity that all holding tanks must be sized to hold?

- **A. 3 days**
- **B. 5 days**
- **C. 7 days**
- **D. 10 days**

2. What factors affect the size of a septic tank?

- **A. The type of household appliances used**
- **B. The number of bedrooms, daily water usage, and type of soil**
- **C. The age of the home and its construction materials**
- **D. The distance to the local water supply**

3. Which statement is true regarding septic tanks?

- **A. All seams and drain holes must be water tight**
- **B. Septic tanks do not require sealing of seams**
- **C. Septic tanks do not need to be inspected**
- **D. Septic tanks should have open holes for drainage**

4. What is a septic system design consideration for high water tables?

- **A. Installing conventional gravity-fed systems.**
- **B. Using elevated systems or mound systems to prevent flooding.**
- **C. Using smaller tank sizes.**
- **D. Implementing surface disposal methods.**

5. Are mercury flow switches allowed on dosing pumps?

- **A. Yes, they are allowed**
- **B. No, they are not allowed**
- **C. Only in certain conditions**
- **D. Only for specific pump brands**

6. Can compacting fill soil to 95% be used instead of allowing the fill to settle for one year?

- **A. Yes**
- **B. No**
- **C. Only in certain conditions**
- **D. Only if client approves**

7. Which practice can help prolong the life of a septic system?

- **A. Using chemical cleaners regularly**
- **B. Disposing of fats and oils down the drain**
- **C. Minimizing water usage**
- **D. Planting trees directly over the drain field**

8. What is the setback distance from a lateral trench for wells?

- **A. 25 feet**
- **B. 50 feet**
- **C. 70 feet**
- **D. 100 feet**

9. What does the wire test evaluate?

- **A. The electrical wiring installation**
- **B. The level of lateral line installation**
- **C. The risk of soil moisture damage during excavation**
- **D. All of the above**

10. What should you do if a trench you are digging for lateral placement is filling with water?

- **A. Stop digging until the curtain drain is installed**
- **B. Continue digging since the trench is designed to absorb water**
- **C. Put a pump in to drain the water**
- **D. Cut down the lower side of the trench**

Answers

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

Explanations

1. What is the minimum storage capacity that all holding tanks must be sized to hold?

A. 3 days

B. 5 days

C. 7 days

D. 10 days

The correct answer is that all holding tanks must be sized to hold a minimum of 7 days of wastewater flow. This requirement is in place to ensure that the tanks can adequately manage fluctuations in wastewater generation, providing a safety buffer in case of emergencies, such as equipment failure or periods of high use. Designing holding tanks for 7 days helps to prevent overflow and protects the environment by reducing the risk of contaminating groundwater or surface water. It also allows for effective waste management and ensures compliance with local health regulations, which often dictate holding times to promote public health and safety. This standard is crucial for maintaining proper function and serviceability in wastewater systems.

2. What factors affect the size of a septic tank?

A. The type of household appliances used

B. The number of bedrooms, daily water usage, and type of soil

C. The age of the home and its construction materials

D. The distance to the local water supply

The size of a septic tank is primarily influenced by several factors that relate directly to the household's usage and the site's characteristics. One of the most significant factors is the number of bedrooms in a home, as this typically correlates with the number of occupants and their wastewater generation. More bedrooms usually mean more people living in the home, resulting in increased water usage and waste production. Daily water usage is another critical factor because it gives an indication of how much wastewater will need to be treated and stored. This includes all water consumed for drinking, cooking, bathing, and other household activities. The type of soil is also essential since it impacts how well the septic system can drain and treat the wastewater. Certain soil conditions may require larger tanks to ensure proper treatment and prevent overflow or system failure. Collectively, these considerations help determine the appropriate size of a septic tank to ensure it functions correctly, preventing issues related to system overload or failure. Other factors, while they can be relevant in specific contexts, do not have the same direct impact on determining septic tank size as those mentioned.

3. Which statement is true regarding septic tanks?

A. All seams and drain holes must be water tight

B. Septic tanks do not require sealing of seams

C. Septic tanks do not need to be inspected

D. Septic tanks should have open holes for drainage

The statement that all seams and drain holes must be watertight is true because septic tanks are designed to contain wastewater safely and prevent any leaks from entering the surrounding soil or groundwater. A watertight structure is critical to ensure that contaminants do not escape from the septic system into the environment, which could pose serious health risks and lead to contamination of water sources. Seams must be properly constructed and sealed to maintain the integrity of the tank. Additionally, any drain holes should be properly installed and secured to prevent unwanted leakage. This watertight requirement is a fundamental aspect of septic system safety and functionality.

4. What is a septic system design consideration for high water tables?

A. Installing conventional gravity-fed systems.

B. Using elevated systems or mound systems to prevent flooding.

C. Using smaller tank sizes.

D. Implementing surface disposal methods.

A high water table presents significant challenges for septic system design because it increases the risk of system flooding and effluent surfacing. To effectively manage these issues, elevated systems or mound systems are often recommended. These designs elevate the septic components above the natural ground level, thereby ensuring that wastewater is treated adequately before it infiltrates the soil. By raising the system, the effluent has better conditions for treatment, allowing it to percolate through soil that is less saturated. Conventional gravity-fed systems are typically unsuitable in these situations, as they rely on gravity to move effluent away from the house and into the soil. In areas with high water tables, such systems can become ineffective or even lead to system overload. Smaller tank sizes do not address the underlying issue of high water tables and might lead to inadequate treatment and potential environmental health risks. Even surface disposal methods, while they may seem viable, could lead to contamination of surface water and are usually not compliant with regulations in high water table conditions. Thus, using elevated systems or mound systems is the most effective strategy for handling septic system installation in areas with high water tables.

5. Are mercury flow switches allowed on dosing pumps?

A. Yes, they are allowed

B. No, they are not allowed

C. Only in certain conditions

D. Only for specific pump brands

Mercury flow switches are not allowed on dosing pumps due to environmental and health concerns associated with mercury. Mercury is a toxic substance that can have severe impacts on both human health and the environment if it is released or improperly disposed of. Regulatory guidelines and standards have increasingly prohibited the use of mercury-containing devices in various applications to minimize the risk of contamination and exposure. Dosing pumps, which are often used in wastewater management and septic systems, require components that are not only effective but also safe for both operators and the environment. Alternatives to mercury flow switches, such as non-mercury electronic or mechanical switches, are widely available and meet the necessary safety and operational standards for these applications. Understanding this reasoning is crucial for ensuring compliance with environmental regulations and for maintaining safe and effective wastewater management practices. This knowledge also equips professionals with the necessary information when selecting components for septic systems.

6. Can compacting fill soil to 95% be used instead of allowing the fill to settle for one year?

A. Yes

B. No

C. Only in certain conditions

D. Only if client approves

Compacting fill soil to 95% achieves a high level of density, which can be beneficial for stability; however, it does not fully substitute for a natural settlement process that allows soil to equilibrate over time. When fill is compacted, it can still experience further consolidation, particularly over wet seasons or under additional loading, which could lead to differential settlement and potential structural issues later on. Allowing the fill to settle for an extended period enables natural processes—like moisture content changes and soil particle rearrangement— to occur, further enhancing stability. This is especially important in areas with high clay content or variable soil conditions, as these soils may behave unpredictably when disturbed. While compaction can help mitigate some immediate settling issues, the natural settling process is crucial for true long-term stability and performance of the soil beneath structures. Therefore, relying solely on compaction without allowing for settling introduces risk that could lead to future problems.

7. Which practice can help prolong the life of a septic system?

A. Using chemical cleaners regularly

B. Disposing of fats and oils down the drain

C. Minimizing water usage

D. Planting trees directly over the drain field

Minimizing water usage is a highly effective practice for prolonging the life of a septic system. Excessive water entering the system can overwhelm it, leading to inefficient treatment of wastewater and potential failure of the system. By using less water, homeowners allow the septic tank to properly separate solids from liquids and facilitate the natural biological processes that treat the waste. Additionally, reducing water flow helps to prevent the drain field from becoming saturated, which can compromise its ability to absorb and filter effluent, ultimately extending the functional lifespan of the septic system. In contrast, the other practices suggested, such as using chemical cleaners, disposing of fats and oils down the drain, or planting trees directly over the drain field, can adversely affect the performance and longevity of a septic system. Chemical cleaners can disrupt the beneficial bacteria needed for breaking down waste; fats and oils can cause clogs in pipes and reduce the system's efficiency; and tree roots can invade the drain field, leading to blockages or damaging the system. Each of these practices can contribute to increased maintenance needs and potential system failure, underscoring the importance of minimizing water usage as a proactive measure.

8. What is the setback distance from a lateral trench for wells?

A. 25 feet

B. 50 feet

C. 70 feet

D. 100 feet

The setback distance from a lateral trench for wells is crucial to ensure the protection of groundwater quality. A setback distance of 70 feet helps prevent contamination from materials that may leach from the wastewater system into the groundwater, which is a vital source of drinking water. This distance allows for adequate separation to account for possible failures or inefficiencies in the septic system, as well as natural filtering effects of the soil. Moreover, this regulation is designed to safeguard public health by mitigating the risk of pathogens and pollutants entering the well water supply. The specified distance is determined by health and safety regulations that aim for sustainable management of water resources. Understanding these setback requirements is essential for ensuring that both septic systems and well water supplies can coexist safely, maintaining the integrity of the water environment while providing necessary sanitation services.

9. What does the wire test evaluate?

A. The electrical wiring installation

B. The level of lateral line installation

C. The risk of soil moisture damage during excavation

D. All of the above

The wire test is specifically designed to assess the risk of soil moisture damage during excavation, particularly in relation to septic systems. This evaluation helps to identify areas where the soil may retain excessive moisture, which can negatively affect the installation and functioning of a septic system. Understanding soil moisture is crucial, as it impacts the system's capacity to function properly and can lead to failures if not addressed prior to installation. While the other options address important aspects of septic system installation, they do not accurately reflect the primary purpose of the wire test. This specific evaluation does not directly relate to examining the electrical wiring installation or the level of lateral line installation, which are broader concerns in the overall assessment of a septic system. The focus of the wire test on soil moisture allows professionals to ensure that installations are carried out in suitable conditions, mitigating the risk of potential issues after the system is put in place.

10. What should you do if a trench you are digging for lateral placement is filling with water?

A. Stop digging until the curtain drain is installed

B. Continue digging since the trench is designed to absorb water

C. Put a pump in to drain the water

D. Cut down the lower side of the trench

If a trench being dug for lateral placement is filling with water, the best course of action is to stop digging until the curtain drain is installed. A curtain drain is designed to redirect water away from the area, preventing accumulation of groundwater in the trench. Continuing to dig in flooded conditions can not only undermine the integrity of the trench walls, posing safety risks, but also complicate the installation process of the septic system components. Having a properly functioning curtain drain in place ensures that excess water is managed effectively, allowing for optimal conditions for the installation of the lateral system. This helps maintain the accuracy of the trench's depth and width, which are crucial for proper system function and effluent absorption. Pumping out the water may seem like a quick solution, but it does not address the underlying issue of water accumulation in the area or the potential safety hazards of working in a wet trench. Similarly, cutting down the lower side of the trench may lead to more instability and erosion, which can further complicate the installation and may lead to a violation of excavation safety protocols. Therefore, waiting for the curtain drain installation is the most prudent approach to ensure a successful septic system installation.