NEHA Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) Practice Exam (Sample)

Study Guide

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Questions

1. Which statement is true regarding Escherichia coli 0157:H7?

A. Tends to cause disease in all who come in contact with it

B. Is difficult to test for

C. Is responsible for numerous diseases of the skin

D. None of the above

2. It is recommended that a contaminated well be abandoned unless which condition is met?

A. All sources of pollution can be found and removed

B. The contaminated stratum is effectively sealed off

C. Persons drinking the water show no adverse health effects

D. A and B above

3. Which pest is associated with a home sanitation issue regarding rodents?

A. Flies

B. Mice

C. Roaches

D. Wasps

4. A "vision" in strategic planning could be defined as:

A. A long-term objective

B. A historical reference

C. A financial projection

D. An operational plan

5. Which would not be considered an appropriate use for a completed landfill?

A. Public work

B. Golf course

C. Housing development

D. Park space

6. Compactibility of soil in landfills primarily depends on which factor?

A. The point at which refuse is discharged on the fill

B. The type of refuse to be compacted

C. The moisture content of the soil

D. The gradient of the particle size of the soil

7. Which of the following is (are) fundamental to the control of inorganic chemicals in drinking water?

A. sanitary survey

B. identification of the sources

C. detection of amounts of pollutants

D. all of the above

8. The minimal recommended air circulation rate for residential buildings is ____ fpm.

A. 30

B. 45

C. 60

D. 75

9. The type of sanitary landfill that should be developed on essentially flat land sited in dry areas is:

A. Depression landfills

B. Area landfills

C. Progressive excavation landfills

D. Cut and cover landfills

10. The term "Federal agency" does not include which of the following?

A. the executive office

B. general local government

C. all agencies of the federal government

D. Indian tribes assuming NEPA responsibilities

Answers

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

Explanations

1. Which statement is true regarding Escherichia coli 0157:H7?

A. Tends to cause disease in all who come in contact with it

B. Is difficult to test for

C. Is responsible for numerous diseases of the skin

D. None of the above

The statement regarding Escherichia coli O157:H7 that is considered true is that it is difficult to test for. This strain of E. coli is known for causing serious gastrointestinal illness, and testing for it can present challenges. One issue is that routine laboratory testing may not always identify the pathogen unless specific tests for it are actively employed. Additionally, E. coli O157:H7 often requires specialized enrichment and selective media for effective isolation, making testing more complex than for other more common pathogens. The difficulty in detection can stem from the fact that E. coli O157:H7 is only one of many strains of E. coli, and without specific testing protocols, it may be easily overlooked. The ability to accurately diagnose an E. coli O157:H7 infection is critical in managing outbreaks and understanding sources of infection, which is why this particular characteristic is significant in environmental health and food safety contexts.

2. It is recommended that a contaminated well be abandoned unless which condition is met?

A. All sources of pollution can be found and removed

B. The contaminated stratum is effectively sealed off

C. Persons drinking the water show no adverse health effects

D. A and B above

Abandoning a contaminated well is an important public health measure to protect individuals from exposure to harmful contaminants. The decision to abandon a well can depend on multiple factors, particularly in relation to the ability to mitigate the contamination. The correct answer involves both conditions A and B, emphasizing that both the removal of pollution sources and the sealing off of contaminated strata are critical for keeping the well operational. When all sources of pollution can be identified and effectively removed, there is a potential for the well to be restored if the contamination can be eliminated. However, merely removing the sources does not guarantee that residual contaminants won't remain or that the water will be safe for consumption unless the entire contaminated stratum is appropriately sealed off. Sealing off the contaminated stratum helps to prevent future contamination of the well water, ensuring that even if contaminants were initially removed, they cannot re-enter the water supply. Relying solely on the absence of adverse health effects among individuals drinking the water is insufficient. This is because health effects can take time to manifest, and exposure to contaminated water may still pose health risks that are not immediately visible. Thus, for a contaminated well to remain functional, it is essential that both the pollution sources are managed appropriately and the safety of the

3. Which pest is associated with a home sanitation issue regarding rodents?

A. Flies

B. Mice

C. Roaches

D. Wasps

Mice are closely associated with home sanitation issues, particularly because their presence is often indicative of inadequate sanitation practices. When there is poor sanitation, such as improperly stored food, unclean surfaces, or readily available nesting sites, it creates an environment conducive to rodent infestations. Mice are adept at finding food and shelter in homes, which is why maintaining cleanliness and proper food storage is essential in preventing infestations. Ensuring that homes are free of clutter, sealing entry points, and practicing good waste management can help mitigate the risk of mice taking residence in a home. Other pests mentioned, such as flies, roaches, and wasps, have different associations and behaviors that do not directly relate to rodent sanitation issues.

4. A "vision" in strategic planning could be defined as:

A. A long-term objective

B. A historical reference

C. A financial projection

D. An operational plan

A "vision" in strategic planning represents a clear and inspiring long-term objective that outlines what an organization aspires to achieve in the future. It encapsulates the ideals and goals that guide decision-making and help align the efforts of all stakeholders towards a common purpose. A well-defined vision serves as a motivational force, providing a sense of direction and a framework within which strategic initiatives can be developed and implemented. This visionary statement typically goes beyond immediate operational goals or financial projections, aiming instead to define the ultimate destination or impact the organization hopes to secure over the long term. It is not merely a reflection of past accomplishments, as a historical reference would be, nor is it limited to the specifics of operational planning or financial metrics. Instead, it inspires and sets the tone for the strategic planning process, helping to communicate a sense of purpose that engages employees and stakeholders alike.

5. Which would not be considered an appropriate use for a completed landfill?

A. Public work

B. Golf course

C. Housing development

D. Park space

A completed landfill can be repurposed for various uses, but it is crucial to consider safety and environmental factors when determining appropriate uses. In the case of a housing development, while it may seem feasible to convert a landfill into residences, there are significant health risks and environmental concerns associated with this choice. Landfills contain decomposing materials that can produce methane and leachate, which is hazardous if it contaminates groundwater. Building residential areas on or near a former landfill can expose inhabitants to these environmental hazards, leading to potential health issues. Furthermore, the structural integrity of the land can be compromised, creating unstable foundations that are unsuitable for housing. On the other hand, repurposing former landfills as public works, golf courses, or parks is generally more acceptable. These usages allow for recreational opportunities while minimizing direct human exposure to the hazardous conditions presented by the landfill materials. Environmental assessments and proper site management can mitigate some of the risks associated with these repurposing options, making them more suitable than housing developments.

6. Compactibility of soil in landfills primarily depends on which factor?

A. The point at which refuse is discharged on the fill

B. The type of refuse to be compacted

C. The moisture content of the soil

D. The gradient of the particle size of the soil

The compactibility of soil in landfills is significantly influenced by the gradient of the particle size of the soil, which refers to the distribution of different particle sizes present in the soil matrix. A well-graded soil, which has a broad range of particle sizes, can pack more efficiently, leading to higher density and reduced void spaces. This compacting effect is crucial in landfills as it maximizes the volume of refuse that can be accommodated and minimizes settlement over time. In landfills, achieving optimal compaction is essential to controlling leachate production and minimizing the potential for groundwater contamination. Coarse particles may provide structural stability, while finer particles assist in filling voids and increasing overall density when compacted. Therefore, the gradient of particle size plays a pivotal role in optimizing these factors. Other factors, such as the moisture content of the soil, do influence compactability but depend on the soil texture and its interaction with different particle sizes. Similarly, while the type of refuse and the point of discharge may affect compaction practices, they are secondary to the inherent properties of the soil itself, particularly the distribution of particle sizes that directly impacts the efficiency of the compaction process.

7. Which of the following is (are) fundamental to the control of inorganic chemicals in drinking water?

A. sanitary survey

B. identification of the sources

C. detection of amounts of pollutants

D. all of the above

The control of inorganic chemicals in drinking water is a multifaceted process that relies on several foundational elements. A sanitary survey is essential as it involves a comprehensive evaluation of the water supply source, the distribution system, and potential contamination sources. This proactive approach helps identify and mitigate risks before they can affect water quality. Identifying the sources of inorganic chemicals is also fundamental. By understanding where these contaminants originate—be it natural sources like mineral deposits or anthropogenic sources such as industrial discharges—measures can be put in place to prevent or reduce exposure to harmful concentrations. Furthermore, the detection of amounts of pollutants is critical to ensuring that water quality meets safety standards. Regular monitoring and testing for the presence of inorganic chemicals allow for timely interventions should concentrations exceed safe limits. Together, these components—sanitary surveys, source identification, and pollutant detection—create a robust framework for effectively managing and controlling the levels of inorganic chemicals in drinking water, making 'all of the above' the comprehensive choice.

8. The minimal recommended air circulation rate for residential buildings is ___ fpm.

A. 30

B. 45

C. 60

D. 75

The minimal recommended air circulation rate for residential buildings is 45 feet per minute (fpm). This recommendation is based on the need to maintain indoor air quality and comfort levels within living spaces. Adequate air circulation plays a crucial role in preventing the accumulation of indoor air pollutants, providing fresh air, and ensuring that temperature is evenly distributed throughout the home. A circulation rate of 45 fpm is generally sufficient to promote adequate ventilation while avoiding drafts that may occur at higher circulation rates. It strikes a balance between efficiency and comfort, allowing for sufficient exchange of air without causing discomfort from excessive airflow. This standard is influenced by factors such as the size of the residence, the number of occupants, and specific HVAC system designs. Understanding the importance of these recommended rates helps ensure that air quality standards are met, which aligns with public health recommendations and best practices in residential environmental health.

9. The type of sanitary landfill that should be developed on essentially flat land sited in dry areas is:

A. Depression landfills

B. Area landfills

C. Progressive excavation landfills

D. Cut and cover landfills

The correct choice is area landfills. Area landfills are designed to be constructed in flat terrains, which allows for efficient waste disposal and management. These landfills work well in dry areas because the lack of excessive moisture can reduce leachate generation, thus minimizing the potential for groundwater contamination. Additionally, the flat land makes it easier to manage the waste placement, cover, and compaction, increasing the overall efficiency of the landfill operation. In contrast, depression landfills typically utilize natural depressions to contain waste, which may not be ideal for flat land. Progressive excavation landfills often involve active excavation processes, which are not as effective in flat, dry areas. Cut and cover landfills involve burying waste beneath the surface, typically in urban areas where land use is at a premium. This technique is not suited for flat, dry regions where an area landfill could be implemented more effectively.

10. The term "Federal agency" does not include which of the following?

A. the executive office

B. general local government

C. all agencies of the federal government

D. Indian tribes assuming NEPA responsibilities

The term "Federal agency" specifically refers to entities established by federal law that operate under the authority of the federal government. Within the context of this question, the executive office is indeed part of the federal government, including entities such as the White House and its various offices that carry out federal policy and administration. In contrast, general local government refers to municipal or county governments responsible for local governance and public services. These entities operate at a state or local level and do not fall under the classification of a federal agency, as they are created by state law rather than federal law. Additionally, all agencies of the federal government naturally fit within the definition of a federal agency, as they are established and operate under federal statutes. Likewise, Indian tribes that have assumed responsibilities under the National Environmental Policy Act (NEPA) may interact with federal standards and requirements but do not constitute a federal agency themselves, as they are sovereign entities recognized by the federal government. Thus, the executive office, being an integral part of the federal structure, is correctly excluded from the term "Federal agency" in this context.