NCCER Pipefitter Certification Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Questions



- 1. What is the proper term for a device that helps to guide and support pipes?
 - A. Clamp
 - **B.** Support
 - C. Hanger
 - D. Bracket
- 2. What is the purpose of a pipe hanger?
 - A. To connect pipes at fittings
 - B. To support and secure piping systems in place
 - C. To isolate impurities from fluid flow
 - D. To seal leaks in pipelines
- 3. What are the two common types of pipe joints?
 - A. Welded joints and soldered joints
 - B. Welded joints and glued joints
 - C. Welded joints and threaded joints
 - D. Threaded joints and compression joints
- 4. What is used to open flanges for the installation of a test blind?
 - A. Pipe Wrench
 - B. C-Clamp
 - C. Flange Spreader
 - D. Pry Bar
- 5. The two types of scaffolds used by pipefitters are the Tubular Buck and?
 - A. Web
 - **B.** Pole
 - C. Beam
 - D. Flange

- 6. The illustrated piece of equipment is a?
 - A. Compressor
 - **B.** Welding machine
 - C. Generator / light tower
 - D. Water pump
- 7. What type of support is required for piping that is field-routed to a pump?
 - A. Off the pump suction
 - **B.** Diagonally
 - C. Independently
 - D. Off the pump discharge
- 8. Which aspect of pipe fitting involves ensuring that the system can handle temperature and pressure variations?
 - A. Heat resistance
 - **B.** Joint integrity
 - C. Support structure
 - **D.** Insulation
- 9. When installing a pipe, what should be prioritized to prevent future issues?
 - A. Cost-saving measures
 - **B.** Warranty options
 - C. Quality of materials and installation techniques
 - D. Using outdated fittings for compatibility
- 10. What is a flexible link seal used for?
 - A. Seal the end of a pipe
 - B. Seal a pipe in a pipe sleeve
 - C. Seal the end of a valve
 - D. Seal the drain in a floor drain

Answers



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



Explanations



1. What is the proper term for a device that helps to guide and support pipes?

- A. Clamp
- **B.** Support
- C. Hanger
- D. Bracket

The proper term for a device that helps to guide and support pipes is "hanger." A hanger is specifically designed to hold pipes in place and can accommodate the weight of the pipe while allowing for thermal expansion and movement. This ensures that the pipes are securely supported and organized, preventing sagging or misalignment. Hangers are often used in various plumbing and piping systems to maintain proper positioning and alignment, especially when dealing with horizontal runs of pipe. They are crucial in maintaining the integrity of the piping system as they help to distribute the load and minimize stress on the joints and fittings. Other devices mentioned, such as clamps and brackets, serve different functions. While clamps can secure pipes tightly together or to a structure, they are typically not used to suspend pipes from above. Supports generally refer to broader systems that might include hangers, but in this specific context, "hanger" is the most accurate term for the device intended specifically for guiding and supporting pipes.

2. What is the purpose of a pipe hanger?

- A. To connect pipes at fittings
- B. To support and secure piping systems in place
- C. To isolate impurities from fluid flow
- D. To seal leaks in pipelines

The purpose of a pipe hanger is primarily to support and secure piping systems in place. Hangers are essential in ensuring that pipes are held at the correct angles and elevations to maintain proper flow, prevent stress on the joints, and avoid undue movement. This stability is vital for the safety and functionality of the piping system, as it prevents sagging or shifting that could lead to damage or leaks. In addition to providing structural support, pipe hangers are designed to accommodate various conditions, such as temperature fluctuations and vibrations, which can occur in a working piping system. By securely holding the pipes, they help ensure that the system operates efficiently and safely under its intended conditions.

3. What are the two common types of pipe joints?

- A. Welded joints and soldered joints
- B. Welded joints and glued joints
- C. Welded joints and threaded joints
- D. Threaded joints and compression joints

Welded joints and threaded joints are the two common types of pipe joints due to their widespread use and effectiveness in various plumbing and piping systems. Welded joints involve fusing two pipe ends together through heat, creating a strong and permanent connection that is highly resistant to leaks. This type of joint is particularly advantageous for high-pressure systems and applications where structural integrity is vital, as it provides a solid bond without adding any additional materials that could weaken the joint. Threaded joints, on the other hand, use male and female threads to connect pipes. This method allows for easy assembly and disassembly, making it convenient for maintenance and repair. Threaded joints are commonly employed in smaller diameter piping systems and applications where flexibility or ease of installation and removal is desired. The other types of joints, such as soldered and glued joints, while used in specific scenarios, do not match the frequency and reliability of welded and threaded joints in the broader context of pipefitting. Soldered joints are typically reserved for copper piping in low-pressure systems, and glued joints are mainly applicable to certain types of plastic piping. Therefore, the combination of welded and threaded joints reflects the most prevalent practices in pipefitting.

4. What is used to open flanges for the installation of a test blind?

- A. Pipe Wrench
- **B.** C-Clamp
- C. Flange Spreader
- D. Pry Bar

The installation of a test blind requires the separation of two flanges to create an opening in the piping system, allowing the test blind to be inserted. A flange spreader is specifically designed for this task. It works by applying a controlled force to the flanges, gently pushing them apart without causing damage to the flange surfaces or the bolts. This tool ensures that the flanges are adequately separated to allow for the safe and effective installation of the test blind. Using a pipe wrench, while it can grip and turn flanges, is not suitable for spreading them apart as it could lead to uneven force application, risking damage. A C-clamp is not designed for spreading but rather for clamping, and a pry bar, though useful for leverage, lacks the precision and appropriate force control needed for flange separation. Thus, the flange spreader is the correct tool for the job, ensuring both safe handling and effective installation.

5. The two types of scaffolds used by pipefitters are the Tubular Buck and?

- A. Web
- **B.** Pole
- C. Beam
- D. Flange

The answer identifies "Pole" as the second type of scaffold used by pipefitters alongside the Tubular Buck. This choice is correct because pole scaffolds are essential for various applications in pipefitting. Pole scaffolds are characterized by the use of vertical poles that provide a framework for supporting platforms and enabling access to different heights when working on piping systems. Pole scaffolding is often utilized in conjunction with the Tubular Buck, with both types offering stable support and safety for pipefitters when they are installing or repairing pipes. The use of pole scaffolds allows for flexibility in construction as they can be adjusted and arranged to meet the specific requirements of the job at hand. Proper scaffolding is critical in pipefitting to ensure safety and efficiency in operations, especially when dealing with heavy and complex piping systems. In contrast, the other options do not represent commonly recognized scaffold types within the context of pipefitting. Web, beam, and flange do not correspond to established scaffolding configurations, hence their inapplicability in this scenario. Understanding the distinct roles that various scaffold types play is vital for ensuring safety and compliance with industry standards.

6. The illustrated piece of equipment is a?

- A. Compressor
- B. Welding machine
- C. Generator / light tower
- D. Water pump

The correct answer is a compressor. A compressor is a device that increases the pressure of a gas by reducing its volume. It is commonly used in various applications, including pneumatic tools, refrigeration, and air conditioning systems. In industrial settings, compressors are crucial for providing compressed air for tools and other machinery. They often have a distinctive design featuring a tank for storing the compressed air and typically include features like gauges, pressure regulators, and various fittings for air hoses. The equipment likely illustrated would show characteristics indicative of a compressor, such as a cylindrical tank or a prominent pump mechanism. Identifying these features is key in differentiating it from other equipment like welding machines, which are used for joining materials; generators or light towers, which provide electricity and lighting; and water pumps, which are designed to move liquids. Each of these has unique functionalities and designs that would not match the typical appearance of a compressor.

- 7. What type of support is required for piping that is field-routed to a pump?
 - A. Off the pump suction
 - **B.** Diagonally
 - C. Independently
 - D. Off the pump discharge

When piping is routed to a pump, it is essential to provide adequate support to ensure the system operates effectively and safely. Supporting the piping independently is crucial because it allows the piping to be secured without relying on the pump or other connected equipment for stability. This independent support helps to prevent stress on the pump and piping connections, reducing the risk of leaks or failures. In independent support systems, the pipe hangers or brackets are anchored to structural components of the building or framework rather than being connected directly to the pump itself. This ensures that any movement or thermal expansion in the piping does not adversely affect the pump. It also helps absorb vibrational forces that may occur during the operation of the pump, thereby enhancing the longevity and reliability of the entire piping system. Other support methods, such as those that depend directly on the pump, can lead to complications or additional stress on the components involved, which is why independent support is the proper choice in this scenario.

- 8. Which aspect of pipe fitting involves ensuring that the system can handle temperature and pressure variations?
 - A. Heat resistance
 - **B.** Joint integrity
 - C. Support structure
 - D. Insulation

The aspect of pipe fitting that involves ensuring the system can handle temperature and pressure variations is related to joint integrity. Joint integrity refers to the strength and reliability of the connections between pipes, fittings, and other components in a piping system. These joints must be able to withstand the thermal expansion and contraction that occurs due to temperature fluctuations, as well as the pressure changes that can happen during system operation. Properly designed and maintained joints ensure that leaks, failures, or other issues do not arise under varying temperature and pressure conditions. The materials used, the type of joint (such as welded, threaded, or flanged), and the application of sealants or gaskets all contribute to the overall effectiveness of joint integrity in meeting these challenges. While other aspects like heat resistance, support structure, and insulation play roles in pipe fitting, they do not directly address the concerns related to maintaining the integrity of joints amid temperature and pressure variations. Heat resistance refers to the ability of materials to withstand elevated temperatures, the support structure pertains to how pipes are anchored and supported to prevent sagging or movement, and insulation relates to preventing heat loss or gain. Joint integrity is the specific factor that ensures the connections can withstand the stresses brought on by changes in operational conditions.

- 9. When installing a pipe, what should be prioritized to prevent future issues?
 - A. Cost-saving measures
 - **B.** Warranty options
 - C. Quality of materials and installation techniques
 - D. Using outdated fittings for compatibility

Prioritizing the quality of materials and installation techniques is crucial when installing a pipe because the integrity of the entire piping system depends on these factors. High-quality materials are less likely to corrode, leak, or fail under pressure, reducing the likelihood of future maintenance issues or costly repairs. Using proven installation techniques ensures that joints and connections are secure, which adds to the durability and reliability of the piping system. When quality is prioritized, it not only enhances the performance of the system but also extends its lifespan, ultimately leading to cost-effectiveness over time. Investing in quality at the outset helps avoid the need for frequent replacements or repairs, which can be far more expensive in the long run compared to any initial savings from inferior materials or sloppy installation practices. This approach not only safeguards against immediate problems but also upholds safety standards and compliance with regulations, contributing to a more successful pipefitting project overall.

10. What is a flexible link seal used for?

- A. Seal the end of a pipe
- B. Seal a pipe in a pipe sleeve
- C. Seal the end of a valve
- D. Seal the drain in a floor drain

A flexible link seal is specifically designed to seal a pipe within a pipe sleeve, which is crucial for ensuring water, gases, or other substances do not leak around the area where the pipe passes through the sleeve. This type of sealing mechanism accommodates the movement and expansion of the pipes that may occur due to thermal changes, vibrations, or other factors. By providing a flexible barrier, the seal maintains the integrity of the system while allowing for necessary movement, thus preventing leaks and ensuring the system's efficiency and safety. The other options do not accurately describe the function of a flexible link seal. Sealing the end of a pipe or a valve would typically involve different kinds of fittings or seals designed for those specific applications, such as caps or flanges, which do not provide the flexibility required in a dynamic system. Similarly, sealing a drain would involve a different provisioning method to address the specific needs of drainage systems, which is not suitable for flexible link seals.