# Aviation Machinist’s Mate (AD) Advancement Practice Exam (Sample)

## Study Guide


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# Questions

**1. What has the primary mission to provide intermediate and advanced strike fighter training?**

**A. T-45 Goshawk**

**B. F/A-18 Hornet**

**C. EA-18G Growler**

**D. F-35 Lightning II**

**2. Larger tools are generally contained in which type of tool container?**

**A. Portable toolbox**

**B. Mechanic's tool box (chest type)**

**C. Drawer cabinet**

**D. Tool belt**

**3. Which system is responsible for planning and scheduling workloads within the maintenance department?**

**A. Quality Assurance**

**B. Maintenance Control**

**C. Personnel Management**

**D. Logistics Support**

**4. What is the maximum nitrogen supply boost pump pressure on the NAN-4?**

**A. 2,500 psi**

**B. 3,000 psi**

**C. 3,500 psi**

**D. 4,000 psi**

**5. What is NOT a component evaluated during an air pressure test for fuel cells?**

**A. Presence of leaks**

**B. Integrity of the fuel cell material**

**C. Temperature changes**

**D. Pressure stability over time**

**6. What was the first aircraft purchased by the Navy from Glenn Curtis in 1911?**

**A. A-1 Triad**

**B. F4F Wildcat**

**C. F6F Hellcat**

**D. P-51 Mustang**

**7. What does the acronym MMCO stand for in the context of NAVAIR?**

**A. Marine Maintenance Control Officer**

**B. Maintenance Management and Control Office**

**C. Navy Maintenance Command Operations**

**D. Maintenance Management Certification Officer**

**8. What distinguishes Camloc high-stress panel fasteners from screws?**

**A. Thread type differences**

**B. Material composition**

**C. The deep No. 2 Phillips recess in the stud head and the bushing in which the stud is installed**

**D. Size and weight**

**9. What hazard code is used to identify alcohol?**

**A. FLAM**

**B. TOX**

**C. CORR**

**D. NOX**

**10. On the A/U26U-1 oxygen servicing unit, how many cylinders of nitrogen are used to drive the boost pump?**

**A. One**

**B. Two**

**C. Three**

**D. Four**

# Answers

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

# Explanations

## 1. What has the primary mission to provide intermediate and advanced strike fighter training?

**A. T-45 Goshawk**

**B. F/A-18 Hornet**

**C. EA-18G Growler**

**D. F-35 Lightning II**

**The T-45 Goshawk is designed primarily for intermediate and advanced strike fighter training. It serves as a trainer for naval aviators transitioning to advanced tactical jet aircraft. The T-45 incorporates advanced technology and systems similar to those found in front-line fighters, providing a realistic training environment that prepares future pilots for the operational demands of flying strike fighter aircraft. This particular aircraft plays a crucial role in the training pipeline, as it equips student pilots with necessary skills such as advanced aerial maneuvers, carrier landing techniques, and the use of onboard systems that they will encounter in operational aircraft. The Goshawk's capabilities make it suited for training missions, ensuring that pilots are thoroughly prepared for their subsequent roles in strike fighter units.**

## 2. Larger tools are generally contained in which type of tool container?

**A. Portable toolbox**

**B. Mechanic's tool box (chest type)**

**C. Drawer cabinet**

**D. Tool belt**

**The larger tools are typically contained in a mechanic's tool box, specifically of the chest type, because these toolboxes are designed to offer ample storage space and accommodate various sizes and types of tools, including larger equipment. Chest-type mechanic's tool boxes are built with multiple drawers and compartments that can handle the weight and size of larger tools, making them easily accessible while keeping the workspace organized. Portable toolboxes and tool belts, while useful for transporting smaller tools and essentials, are not sized to hold larger equipment securely. A drawer cabinet can store larger tools as well, but it generally refers to a stationary storage solution that may not be as practical for a mechanic who needs to access tools frequently in a dynamic work environment like an aircraft maintenance setting. Thus, the chest-type mechanic's toolbox stands out as the most suitable option for housing larger tools effectively.**

## 3. Which system is responsible for planning and scheduling workloads within the maintenance department?

**A. Quality Assurance**

**B. Maintenance Control**

**C. Personnel Management**

**D. Logistics Support**

**The system responsible for planning and scheduling workloads within the maintenance department is Maintenance Control. This function plays a crucial role in organizing the maintenance tasks required for aircraft or equipment, ensuring that all necessary repairs and services are carried out efficiently and effectively. Maintenance Control coordinates with various teams to prioritize work based on urgency, availability of resources, and aircraft readiness, thereby optimizing the workflow in the maintenance environment. By accurately planning and scheduling maintenance tasks, Maintenance Control contributes to the overall effectiveness and safety of aircraft operations. This includes tracking work orders, managing staff assignments, and ensuring that necessary materials and tools are available for each job. The leadership and oversight provided by Maintenance Control are essential for maintaining high operational standards and compliance with safety regulations in the aviation field.**

## 4. What is the maximum nitrogen supply boost pump pressure on the NAN-4?

**A. 2,500 psi**

**B. 3,000 psi**

**C. 3,500 psi**

**D. 4,000 psi**

**The maximum nitrogen supply boost pump pressure on the NAN-4 is 3,500 psi. This pressure is crucial as it ensures that the system operates effectively within its design parameters, facilitating the proper functioning of the hydraulic and pneumatic systems that rely on nitrogen for actuation and performance. Understanding the operational limits of equipment like the NAN-4 is essential for maintaining safety and ensuring that the aircraft's systems operate reliably. A pressure setting of 3,500 psi is indicative of the system's capacity to handle operational demands while allowing for a margin of safety and effective response in various conditions. The other pressure options exceed the established limits for the nitrogen supply boost pump, which could lead to malfunctions or potential damage to the system if pressures higher than 3,500 psi are encountered. This highlights the importance of adhering to manufacturer specifications to promote the longevity and reliability of aircraft components.**

## 5. What is NOT a component evaluated during an air pressure test for fuel cells?

**A. Presence of leaks**

**B. Integrity of the fuel cell material**

**C. Temperature changes**

**D. Pressure stability over time**

**During an air pressure test for fuel cells, the focus is primarily on the structural integrity and functionality of the fuel cell materials. Evaluating the presence of leaks is crucial, as any leaks could compromise the fuel cell's ability to hold fuel pressure and operate effectively. Checking for the integrity of the fuel cell material is also essential because it ensures that the cell can withstand operational stresses without failure. Pressure stability over time is significant because it helps to confirm that the fuel cell can maintain the required pressure without any fluctuations that may indicate potential issues. Temperature changes, however, are not typically a direct component evaluated during an air pressure test for fuel cells. While temperature can affect pressure readings and fuel cell performance in general, it is not a primary focus of the test itself. The test mainly assesses whether the fuel cell can maintain pressure without leaks or structural failures under the specific conditions it's designed for.**

## 6. What was the first aircraft purchased by the Navy from Glenn Curtis in 1911?

**A. A-1 Triad**

**B. F4F Wildcat**

**C. F6F Hellcat**

**D. P-51 Mustang**

**The first aircraft purchased by the Navy from Glenn Curtiss in 1911 was the A-1 Triad. This aircraft holds historical significance as it was one of the earliest naval aircraft and marked a pivotal moment in military aviation. The A-1 Triad was designed for versatility and was unique in its capability to take off and land on both water and land, featuring a float for operations over water and conventional landing gear for terrestrial landing. In 1911, the U.S. Navy recognized the potential of aviation in military applications, and the A-1 Triad became a foundational model that influenced future naval aircraft development. The aircraft represented the beginning of the Navy's investment in aviation technology, setting the stage for subsequent advancements and operational tactics involving aircraft carrier operations. In contrast, the other options listed, like the F4F Wildcat, F6F Hellcat, and P-51 Mustang, were not in service during this early period of naval aviation. The Wildcat and Hellcat were introduced during World War II, and the P-51 Mustang was primarily associated with the Army Air Forces, making the A-1 Triad the clear historical choice as the first aircraft purchased by the Navy from Glenn Curtiss.**

## 7. What does the acronym MMCO stand for in the context of NAVAIR?

**A. Marine Maintenance Control Officer**

**B. Maintenance Management and Control Office**

**C. Navy Maintenance Command Operations**

**D. Maintenance Management Certification Officer**

**The acronym MMCO stands for Marine Maintenance Control Officer in the context of NAVAIR. This term refers to a specific role within the Navy's aviation maintenance community, focusing on overseeing and coordinating maintenance activities to ensure operational readiness and effectiveness. The responsibilities of a Marine Maintenance Control Officer may include managing maintenance schedules, addressing issues that arise during repair processes, and ensuring compliance with established maintenance protocols. This role is crucial in supporting the readiness of aircraft and other aviation systems. While the other options present plausible interpretations of maintenance-related roles or offices, none match the established terminology used within NAVAIR for MMCO. Understanding this term and its implications helps four current and future Aviation Machinist's Mates comprehend the structure and functions of their operational environment better.**

## 8. What distinguishes Camloc high-stress panel fasteners from screws?

**A. Thread type differences**

**B. Material composition**

**C. The deep No. 2 Phillips recess in the stud head and the bushing in which the stud is installed**

**D. Size and weight**

**Camloc high-stress panel fasteners are specifically designed with unique features that enhance their functionality and ease of use in high-stress applications. The defining characteristic that sets them apart from traditional screws is the deep No. 2 Phillips recess in the stud head and the corresponding bushing into which the stud is installed. This design allows for quick engagement and disengagement, facilitating easier panel access while providing a secure fastening solution. The deep recess not only accommodates a more substantial turning force without stripping but also helps guide the fastener into the bushing accurately, ensuring proper alignment and fit. This specialized design makes Camloc fasteners particularly advantageous in aviation and other demanding environments where reliability and quick access are critical. While other options such as thread type differences, material composition, and size and weight may play a role in differentiating fasteners in general, the specific mechanics of the deep recess and bushing setup are what uniquely characterize Camloc fasteners in comparison to conventional screws.**

## 9. What hazard code is used to identify alcohol?

**A. FLAM**

**B. TOX**

**C. CORR**

**D. NOX**

**The hazard code used to identify alcohol is FLAM. This designation is notable because alcohol, such as ethanol or isopropanol, is highly flammable. The FLAM code indicates that substances in this category can easily ignite and produce flames, which is critical information for handling and storage practices in aviation and other industries. Understanding the significance of hazard codes is essential for ensuring safety in the workplace, particularly in environments where flammable substances are present. By using the correct hazard code, personnel can implement appropriate precautions, such as maintaining proper ventilation, using fire-resistant containers, and ensuring the availability of fire extinguishers in the vicinity to mitigate fire risks. Recognizing the FLAM code thus directly impacts safety protocols and responses to emergencies involving alcohol and other flammable substances.**

## 10. On the A/U26U-1 oxygen servicing unit, how many cylinders of nitrogen are used to drive the boost pump?

**A. One**

**B. Two**

**C. Three**

**D. Four**

**The correct answer indicates that two cylinders of nitrogen are used to drive the boost pump on the A/U26U-1 oxygen servicing unit. In this system, nitrogen serves a critical role in operating the boost pump effectively, as it provides the necessary pressure to ensure that the pump can function properly and deliver the required flow of oxygen. Using two cylinders allows the system to maintain adequate pressure and support continuous operation without the risk of exhausting the nitrogen supply too quickly, which is essential for consistent service. This design ensures that the unit can reliably perform its functions, especially in critical situations where oxygen servicing is required for aircraft. Providing two cylinders also contributes to operational efficiency and backup, as having a secondary cylinder allows for uninterrupted service in the event that one cylinder needs to be replaced or serviced. This redundancy is a significant consideration in aviation maintenance and safety.**