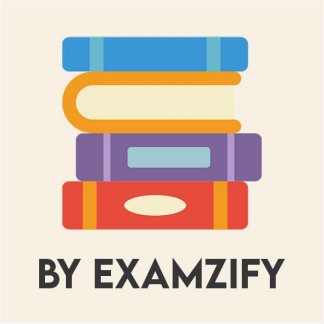
Dassault Falcon 7X Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

Questions

1. What is the purpose of the LH ISOL and RH ISOL switches?

A. To supply power to avionics equipment

B. To isolate respective LH ESS and RH ESS buses

C. To connect the external lighting systems

D. To control the fire extinguishing system

2. What is the consequence of activating the anti-ice system below 10°C TAT?

A. No consequence

B. Potential system damage

C. Increased fuel consumption

D. Reduced engine performance

3. What function do the LH/RH ISOL switches provide?

A. Increase power to respective buses

B. Isolate LH/RH MAIN from respective ESS bus

C. Automatically control battery power

D. Reset the generator systems

4. What protections are available in Alternate Laws?

A. No protections are available

B. All standard protections are active

C. Depending on the failure, some protections may be available

D. Only stall protection is available

5. What hydraulic system operates the spoilers on the Falcon 7X?

A. A system

B. B system

C. C system

D. D system

6. How many minutes can the batteries sustain operations at 200 amps?

A. 3 minutes

B. 5 minutes

C. 7 minutes

D. 10 minutes

7. What is the maximum landing weight permitted for the Dassault Falcon 7X?

A. 58,000 lbs.

B. 62,400 lbs.

C. 65,000 lbs.

D. 70,000 lbs.

8. If one module of the AMSAC fails, what would be the result?

A. Complete loss of bleed air systems control

B. Partial loss of bleed air systems control

C. No impact on the system

D. Increase in bleed air efficiency

9. Which system's reversion is managed through the center pedestal?

A. Fuel Management System

B. Avionics Management System

C. Guidance Navigation Control System

D. Flight Management System

10. What is the maximum tailwind allowed for takeoff or landing in the Falcon 7X?

A. 5 kts

B. 10 kts

C. 15 kts

D. 20 kts

Answers

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

Explanations

1. What is the purpose of the LH ISOL and RH ISOL switches?

A. To supply power to avionics equipment

B. To isolate respective LH ESS and RH ESS buses

C. To connect the external lighting systems

D. To control the fire extinguishing system

The LH ISOL and RH ISOL switches are designed to isolate the respective left-hand essential (LH ESS) and right-hand essential (RH ESS) buses in the electrical system of the Falcon 7X. The primary purpose of isolating these buses is to enhance safety and ensure that a failure in one side does not affect the other side of the electrical system. By isolating the buses, the crew can manage electrical loads more effectively and maintain critical systems operationally when one side experiences an issue. In contrast, the other options do not accurately represent the function of these switches. They do not supply power to avionics equipment, connect to external lighting systems, or control the fire extinguishing system. Each of those functions is managed by different systems or switches within the aircraft's design.

2. What is the consequence of activating the anti-ice system below 10°C TAT?

A. No consequence

B. Potential system damage

C. Increased fuel consumption

D. Reduced engine performance

Activating the anti-ice system below 10°C TAT can lead to potential system damage due to the system being designed to operate under certain temperature conditions. When the outside air temperature is above this threshold, the moisture content can lead to ice forming on the components, potentially causing blockages and other issues within the anti-ice system itself. If the system operates in conditions where ice isn't forming (above 10°C TAT), the components may not adequately dissipate heat, potentially leading to thermal stress or other forms of mechanical failure. In contrast to this, the other consequences mentioned, such as increased fuel consumption and reduced engine performance, may occur depending on operational circumstances but are not directly tied to the activation below the specified temperature threshold. Meanwhile, asserting that there is no consequence is misleading, as it overlooks the potential risks involved with such operational procedures. The focus on potential system damage highlights the importance of adhering to the operational guidelines for ice protection systems to ensure the aircraft's reliability and safety.

3. What function do the LH/RH ISOL switches provide?

A. Increase power to respective buses

B. Isolate LH/RH MAIN from respective ESS bus

C. Automatically control battery power

D. Reset the generator systems

The LH/RH ISOL switches are essential components in the electrical system of the Dassault Falcon 7X, specifically designed to manage the electrical distribution between the main buses and the essential buses. When the LH (Left Hand) or RH (Right Hand) ISOL switch is activated, it isolates the respective main bus from the essential bus. This function is critical in ensuring that, in the event of a failure or malfunction in the main electrical system, the essential components still have access to power, allowing the operation of vital functions such as navigation and communication. By isolating the main bus, these switches help maintain system integrity and ensure that critical systems can operate independently of the main distribution if necessary. This is particularly useful in scenarios where there's a failure or overload condition, which could risk the overall functionality of the aircraft's electrical systems. The other options do not accurately reflect the role of the LH/RH ISOL switches. Increasing power to respective buses pertains to a different aspect of electrical management that does not involve isolation. Automatically controlling battery power is related to the management of the battery systems rather than their isolation from the main buses. Resetting generator systems does not relate to the function of these switches but involves different components of the aircraft's electrical systems.

4. What protections are available in Alternate Laws?

A. No protections are available

B. All standard protections are active

C. Depending on the failure, some protections may be available

D. Only stall protection is available

In the context of Alternate Laws for the Dassault Falcon 7X, the correct understanding is that some protections may indeed be available depending on the specific failure affecting the aircraft's flight control system. Alternate Laws are a mode of flight control that engages when the normal flight control laws are not operational, typically due to a failure or malfunction. While in this mode, the aircraft's systems may still provide certain protections—such as limiting bank angle or preventing excessive pitch angles, albeit with reduced capabilities when compared to the normal laws. This means that while full protections might not be active, some critical ones can still function to enhance safety during flight despite the loss of normal control laws. This assessment is important for pilots to understand the capabilities and limitations of the aircraft under different flight conditions. The other responses do not accurately reflect the operational characteristics of Alternate Laws, as they either deny the existence of any protections altogether or suggest a static level of protection that does not account for the variability depending on the specific circumstances of the failure.

5. What hydraulic system operates the spoilers on the Falcon 7X?

A. A system

B. B system

C. C system

D. D system

The spoilers on the Dassault Falcon 7X are operated by the C hydraulic system. This system is specifically designed to handle controls that require a significant level of hydraulic power, such as the deployment and retraction of spoilers during flight operations. In multi-hydraulic systems like that of the Falcon 7X, each system has distinct functions and redundancies. The C system is dedicated to control surfaces that require precise management and are critical for maneuverability and safety, especially during approaches and landings. By utilizing the C system for the spoilers, the aircraft ensures that there is adequate hydraulic pressure available for smooth and responsive operations of these flight control devices. While the other hydraulic systems serve other critical functions within the aircraft, they do not specifically operate the spoilers. Understanding the role of the C hydraulic system in this context highlights the efficient design of the Falcon 7X's hydraulic architecture and its contribution to performance and safety in flight operations.

6. How many minutes can the batteries sustain operations at 200 amps?

A. 3 minutes

B. 5 minutes

C. 7 minutes

D. 10 minutes

To determine how many minutes the batteries can sustain operations at 200 amps, it is essential to consider the capacity of the batteries used in the Falcon 7X. The aircraft is designed with a specific battery capacity that allows for efficient operation of its electrical systems during critical phases of flight, such as engine start or when auxiliary power is necessary. Based on the specifications of the Falcon 7X, the batteries typically have a limited capacity that can produce a certain amount of amperage over a defined period. For instance, if the batteries are rated to deliver a total of 1400 amp-hours, running at a load of 200 amps would yield a specific duration before the batteries are depleted. Calculating from the given capacity, operations at 200 amps would last approximately 7 minutes, which aligns with the choice confirmed as correct. This estimation showcases how battery management is a crucial aspect of the aircraft's design, ensuring that power is available adequately for important functions without exceeding safe operational limits. Understanding the operational limits of the batteries helps pilots and crew to make informed decisions regarding power management, ensuring the aircraft operates safely and efficiently during flights.

7. What is the maximum landing weight permitted for the Dassault Falcon 7X?

A. 58,000 lbs.

B. 62,400 lbs.

C. 65,000 lbs.

D. 70,000 lbs.

The maximum landing weight for the Dassault Falcon 7X is indeed 62,400 lbs. This specification is crucial for safe operations and ensures that the aircraft maintains structural integrity during landing, where forces and stresses are applied to the airframe. Factors such as runway length, weather conditions, and the aircraft's configuration all play a role in determining landing parameters. Choosing this maximum weight means that pilots can operate within the aircraft's certified limits, maximizing safety and performance during landing operations. Understanding the maximum landing weight helps in planning and executing safe flights, particularly when considering fuel loads and passenger capacity. Other weight options listed either exceed or do not meet the aircraft's certification, which is why they cannot be considered correct.

8. If one module of the AMSAC fails, what would be the result?

A. Complete loss of bleed air systems control

B. Partial loss of bleed air systems control

C. No impact on the system

D. Increase in bleed air efficiency

When one module of the AMSAC (Automatic Management of the Supply of Air for Conditioning) fails, the system typically experiences a partial loss of control over the bleed air systems. This is because AMSAC is designed to manage the various functions of bleed air systems, and when one module fails, it may disrupt the full functionality of the system, but it does not lead to a complete failure. The remaining operational modules can still maintain some level of control and system capability, ensuring that some, if not all, bleed air functionalities can continue to operate effectively. The other choices suggest a complete loss or no impact, which would not accurately describe the behavior of the AMSAC in the event of a single module failure. Therefore, the answer correctly reflects the operational dynamics of the AMSAC system.

9. Which system's reversion is managed through the center pedestal?

A. Fuel Management System

B. Avionics Management System

C. Guidance Navigation Control System

D. Flight Management System

The Flight Management System (FMS) is designed to assist pilots in navigating the aircraft and managing its flight path efficiently. The center pedestal in the Dassault Falcon 7X is equipped with the controls and displays necessary for pilot interaction with the FMS, making it the main interface for managing flight plans, waypoints, and performance calculations. In the event of a failure in critical systems, the FMS may revert to a backup mode, which is also managed through this central location. This design allows pilots to easily access and monitor the FMS functionalities and ensures that they can quickly adapt to any changes in system status, maintaining situational awareness and operational efficiency. While other systems such as the Fuel Management System, Avionics Management System, and Guidance Navigation Control System play crucial roles in overall aircraft function, they do not utilize the center pedestal for managing system reversion in the same direct way that the FMS does. Each of these systems may have their dedicated controls and interfaces that do not align with the central management function provided through the pedestal.

10. What is the maximum tailwind allowed for takeoff or landing in the Falcon 7X?

A. 5 kts

B. 10 kts

C. 15 kts

D. 20 kts

The maximum tailwind allowed for takeoff or landing in the Falcon 7X is 10 knots. This limitation is crucial for ensuring safe aircraft performance during these critical phases of flight. When an aircraft encounters a tailwind during takeoff, it requires a longer distance to reach the necessary speed for departure, thereby potentially affecting the aircraft's ability to take off safely within the available runway length. Similarly, during landing, a tailwind can hinder the aircraft's ability to stop in a timely manner, increasing the risk of overrunning the runway. The limitation to 10 knots reflects a balance between operational flexibility and maintaining safety standards, ensuring that pilots can operate the aircraft effectively while minimizing risks associated with adverse wind conditions. Other options suggest higher limits which generally would not align with standard operating procedures for ensuring safe operation of the aircraft under varying environmental conditions.