

# Academic Block 2 - Systems 1 (SY190), UPT 2.5 Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

**Remember:** successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!**

## Questions

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- 1. What is the primary power source for the PMU?**
  - A. Backup battery**
  - B. Primary Magnet Alternator**
  - C. Solar panel**
  - D. Generator**
  
- 2. Which statement is correct regarding the control of avionics and radio systems?**
  - A. They can be powered independently of the master switch**
  - B. All systems are affected by the Avionics Master Switch**
  - C. Backup systems require the main switch to be operational**
  - D. They can function during power failure**
  
- 3. During aerobatic flight, oil pressure should be maintained at or above which value?**
  - A. 20 psi**
  - B. 30 psi**
  - C. 40 psi**
  - D. 50 psi**
  
- 4. In which section of an aircraft would you find the AOA computer?**
  - A. Under the cockpit**
  - B. Near the rear fuselage**
  - C. Avionics shelf under the front glareshield**
  - D. In the engine compartment**
  
- 5. What condition must be met for the landing light and taxi light to illuminate?**
  - A. Switch must be on and the gear is up and locked**
  - B. Switch must be off and the gear is down and locked**
  - C. Switch is on and the gear is down and locked**
  - D. Switch is off and the gear is up and unlocked**

- 6. Which of the following is NOT a secondary power source in the T-6?**
- A. 24 VDC, 42 ampere-hour battery**
  - B. 24 VDC, 5 ampere-hour battery**
  - C. External Power receptacle**
  - D. 12 VDC, 20 ampere-hour battery**
- 7. What happens to the aircraft's pressurization control valve when the solenoid dump valve is activated?**
- A. It remains closed**
  - B. It opens to release pressure**
  - C. It regulates fuel flow**
  - D. It sends power to the AOA**
- 8. What is the primary purpose of the PMU?**
- A. To enhance fuel efficiency**
  - B. To maintain engine and propeller within operating limits**
  - C. To control cabin temperature**
  - D. To manage electrical systems**
- 9. At what fuel level do the indicator arrows on the AEDD turn yellow?**
- A. 100 lbs**
  - B. 150 lbs**
  - C. 200 lbs**
  - D. 250 lbs**
- 10. Where is the cockpit temperature control sensor located?**
- A. Near the cockpit ceiling**
  - B. By the feet of the instrument panel**
  - C. At the rear of the cockpit**
  - D. In the engine compartment**

## Answers

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

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## **Explanations**

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## 1. What is the primary power source for the PMU?

- A. Backup battery
- B. Primary Magnet Alternator**
- C. Solar panel
- D. Generator

The primary power source for the Power Management Unit (PMU) is indeed the Primary Magnet Alternator. This component is essential in providing the necessary electrical power for the aircraft's various systems during operation. The PMU plays a crucial role in managing the power distributed throughout the aircraft, ensuring that all systems have the required power supply for optimal functionality and safety. The Primary Magnet Alternator generates electrical energy through the conversion of mechanical energy, typically derived from the engine's operation. This method of power generation is efficient and reliable, making it suitable for the demands of aviation systems. In contrast, while a backup battery is important for providing power in emergency situations, it is not the main source during regular operations. Solar panels, although useful in some modern and hybrid applications, are not typically used as a primary source in many aircraft. A generator is more of a general term that can refer to various systems but does not specify the type used in aircraft. Therefore, the Primary Magnet Alternator is the definitive answer, as it fulfills the essential role of supplying power to the PMU.

## 2. Which statement is correct regarding the control of avionics and radio systems?

- A. They can be powered independently of the master switch
- B. All systems are affected by the Avionics Master Switch**
- C. Backup systems require the main switch to be operational
- D. They can function during power failure

The statement regarding avionics and radio systems being affected by the Avionics Master Switch is accurate because the master switch is specifically designed to control the power to all avionics and radio systems within the aircraft. This switch allows the pilot to easily manage power to these systems, ensuring they are either operational or completely shut down when necessary to conserve battery life or reduce distractions. When the avionics master switch is turned off, it effectively disconnects the power supply to those systems, meaning they will not function without the switch being in the "on" position. This integrated control is critical for managing the operational status of avionics equipment and ensures that power is controlled efficiently while minimizing potential electrical issues during flight. In contrast, other options suggest independence from the avionics master switch or the ability of systems to operate without it, which isn't typical in aircraft systems where the master switch plays a crucial role in power management.

**3. During aerobatic flight, oil pressure should be maintained at or above which value?**

- A. 20 psi**
- B. 30 psi**
- C. 40 psi**
- D. 50 psi**

In aerobatic flight, maintaining adequate oil pressure is crucial for ensuring the proper lubrication and functioning of the engine, especially under the stresses and variations in attitude and G-forces encountered during maneuvers. The correct value to maintain oil pressure at or above is typically standardized to ensure engine safety and performance. Maintaining oil pressure at 40 psi is important because it signifies that the oil is circulating correctly, providing necessary lubrication to engine components and preventing potential overheating or mechanical failure, which can arise from inadequate lubrication. This pressure level serves as a safeguard against fluctuations that might occur during aerobatic conditions, where normal operating parameters can be challenged due to changes in orientation and load. Lower oil pressures could indicate insufficient oil flow or potential issues within the engine system. Conversely, the specified threshold of 40 psi provides a balance that supports optimal engine performance and reliability, ensuring that the engine can cope with the demands of aerobatics without risking damage.

**4. In which section of an aircraft would you find the AOA computer?**

- A. Under the cockpit**
- B. Near the rear fuselage**
- C. Avionics shelf under the front glareshield**
- D. In the engine compartment**

The angle of attack (AOA) computer is typically found on the avionics shelf located under the front glareshield of an aircraft. This placement is strategic as it allows the AOA computer to interface directly with various instruments and sensors in the cockpit that are critical for providing pilots with real-time data about the aircraft's angle of attack. The avionics shelf is designed to house various electronic components and systems that facilitate communication and data processing necessary for flight operations. Placing the AOA computer in this section ensures optimal accessibility for maintenance and monitoring, while also keeping it within the reach of the cockpit instruments. In contrast, housing the AOA computer in areas such as under the cockpit, near the rear fuselage, or in the engine compartment would not provide the necessary connectivity and protection required for effective operation. Such locations may also pose challenges for timely maintenance and access during flight operations, making the dedicated avionics shelf the most appropriate choice.

**5. What condition must be met for the landing light and taxi light to illuminate?**

- A. Switch must be on and the gear is up and locked**
- B. Switch must be off and the gear is down and locked**
- C. Switch is on and the gear is down and locked**
- D. Switch is off and the gear is up and unlocked**

The correct condition for the landing light and taxi light to illuminate is that the switch must be on and the gear must be down and locked. This ensures that both safety and operational readiness are maintained during critical phases of flight. When the gear is down and locked, it indicates that the aircraft is in a state appropriate for landing or taxiing, where visibility is crucial. The landing and taxi lights are designed to provide additional illumination during these phases to help pilots navigate and make the aircraft more visible to others. If the landing gear were not down and locked, the aircraft could be in a position where activating these lights would be inappropriate or could indicate a state of emergency. Thus, for the lights to function correctly, the switch must be on, confirming that the pilot intends to use them, along with the gear being down and locked, signaling that the aircraft is safely configured for landing or taxiing operations.

**6. Which of the following is NOT a secondary power source in the T-6?**

- A. 24 VDC, 42 ampere-hour battery**
- B. 24 VDC, 5 ampere-hour battery**
- C. External Power receptacle**
- D. 12 VDC, 20 ampere-hour battery**

The option related to the 12 VDC, 20 ampere-hour battery is not considered a secondary power source in the T-6. In aircraft systems, a secondary power source usually refers to systems that provide backup or supplemental power to the primary systems, which are typically supported by a specific voltage and capacity. The T-6 uses a 24 VDC battery, so the referent power source must match this specification to be classified as secondary. A 12 VDC battery deviates from the standard operating voltage for the aircraft's systems, making it unsuitable for providing the required power levels. Moreover, the capacities of 5 ampere-hour and 42 ampere-hour batteries listed in the other options are related to batteries that meet aircraft specifications for secondary power. The external power receptacle is also used in conjunction with these systems to support them when ground power is available. Thus, the 12 VDC battery stands out as not conforming to the necessary voltage or typically accepted power levels for a secondary power source in the T-6 context.

**7. What happens to the aircraft's pressurization control valve when the solenoid dump valve is activated?**

- A. It remains closed**
- B. It opens to release pressure**
- C. It regulates fuel flow**
- D. It sends power to the AOA**

When the solenoid dump valve is activated, the aircraft's pressurization control valve opens to release pressure. This process is crucial for managing the internal cabin pressure of the aircraft, especially during descent or in case of an emergency. The activation of the solenoid dump valve signals the system to reduce pressure within the cabin, which is essential for maintaining safety and comfort for passengers and crew. By opening the pressurization control valve, excess cabin pressure is allowed to escape, thus ensuring that the cabin pressure is adjusted to appropriate levels as the aircraft transitions altitude. In contrast, the other options deal with functions unrelated to the direct control of cabin pressure. Regulating fuel flow and sending power to the angle of attack (AOA) sensors are distinct systems within the aircraft that do not pertain to the operation of the pressurization system and its response to the solenoid dump valve activation.

**8. What is the primary purpose of the PMU?**

- A. To enhance fuel efficiency**
- B. To maintain engine and propeller within operating limits**
- C. To control cabin temperature**
- D. To manage electrical systems**

The primary purpose of the Power Management Unit (PMU) is to maintain the engine and propeller within their operating limits. This involves monitoring and controlling various parameters, such as fuel flow, engine speed, and propeller pitch, to ensure optimal performance and safety. By regulating these factors, the PMU helps prevent conditions that could lead to engine failure or propeller damage, thereby ensuring the aircraft operates efficiently and safely during flight operations. While enhancing fuel efficiency is certainly a beneficial outcome of proper management and control, it is not the central function of the PMU. Similarly, while managing electrical systems and controlling cabin temperature are important for overall aircraft operations, those tasks are typically handled by other systems, such as electrical management systems and environmental control systems, respectively. Hence, the core role of the PMU is specifically focused on the engine and propeller's operational integrity.

**9. At what fuel level do the indicator arrows on the AEDD turn yellow?**

- A. 100 lbs**
- B. 150 lbs**
- C. 200 lbs**
- D. 250 lbs**

The indicator arrows on the AEDD turning yellow signifies a warning about the fuel level. Specifically, in many aircraft systems, the yellow indication typically alerts the crew that the fuel levels are approaching a threshold where caution is necessary. In this context, the correct fuel level for when the indicator arrows turn yellow is 150 lbs. Maintaining awareness of fuel levels is critical for safety and operational efficiency; thus, this warning allows pilots to take appropriate measures to manage flight operations without risking running out of fuel. The thresholds for fuel indications are designed to provide timely alerts that facilitate decision-making, ensuring that pilots have the information needed to maintain safe operational practices.

**10. Where is the cockpit temperature control sensor located?**

- A. Near the cockpit ceiling**
- B. By the feet of the instrument panel**
- C. At the rear of the cockpit**
- D. In the engine compartment**

The cockpit temperature control sensor is positioned by the feet of the instrument panel. This location is practical as it allows the sensor to accurately gauge the temperature in the cockpit environment where the crew is seated. By having the sensor close to the instrument panel, it ensures that the readings reflect the conditions that the pilot and co-pilot experience, enabling better regulation of cabin climate and contributing to a comfortable flying environment. The other locations mentioned are not optimal for measuring cockpit temperature effectively. For instance, placing a sensor near the cockpit ceiling might yield misleading readings due to heat accumulation or radiator effects. Placing it at the rear of the cockpit could also expose it to uneven airflow and temperature gradients, leading to inaccurate readings. Meanwhile, situating the sensor in the engine compartment would expose it to much higher temperatures and potentially damaging conditions that are not representative of the cockpit environment.

## Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://acad2sy90upt25.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**

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