Power Plant and Fuel System Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

Table of Contents

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

1. There are _____ fuel tanks in the UH-72 located beneath the cabin floor.

A. Four

B. Three

C. Five

D. Six

2. Where is the VARTOMS Mode Selector control located in the cockpit?

A. Main switch panel

B. HUD panel

C. Rudder Pedal Assembly

D. Tailcone access panel

3. The right supply tank (larger) holds how many pounds?

A. 1308

B. 118

C. 222

D. 104

4. The TWIST GRIP caution light will illuminate until the twist grip is placed in which position?

A. Idle (I)

B. Flight (F)

C. Ground (G)

D. Takeoff (T)

5. How many equipment plates does the aft portion of the engine have?

A. 1

B. 0

C. 2

D. 3

6. Which of the following is not a UH-72 fuel tank?

- **A. Center**
- **B. Aft**
- **C. Forward**
- **D. Right**

7. The engine trim 4-way beeper switch on the pilot's and co-pilot's collective is active only when which system is in manual mode?

- **A. N1 control system**
- **B. N2 control system**
- **C. Hydraulic control**
- **D. VARTOMS (Variable Rotor Speed Torque Matching System)**

8. Which statement best describes a function of the engine control system?

- **A. To keep the rotor speed constant under all operations.**
- **B. To allow manual control of the fuel flow for starting, and in case of fuel control failure.**
- **C. To monitor hydraulic pressure and trigger fault indication.**
- **D. To coordinate engine shutdown procedures in abnormal conditions.**

9. What is the purpose of the fuel vent system in the aircraft?

- **A. Unpressurized**
- **B. Pressurized**
- **C. Sealed**
- **D. Vented**

10. Which component is responsible for initiating engine shutdown during an overspeed condition?

- **A. Fuel pump**
- **B. Starter motor**
- **C. VARTOMS**
- **D. Overspeed solenoid valve**

Answers

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

Explanations

1. There are _____ fuel tanks in the UH-72 located beneath the cabin floor.

A. Four

B. Three

C. Five

D. Six

The key idea here is how fuel capacity is stored without compromising balance and space. Four fuel tanks placed under the cabin floor give enough usable capacity while keeping the center of gravity stable as fuel is burned. Their symmetric, banked arrangement allows balanced fuel draw from all tanks, reducing CG shifts during flight. This layout also provides redundancy and keeps the fuel system compact and protected inside the fuselage. If there were fewer tanks, you'd either lose range or have to rely on larger tanks elsewhere, and more tanks would add unnecessary weight and complexity. So four tanks under the cabin floor is the right design choice for capacity, balance, and safety.

2. Where is the VARTOMS Mode Selector control located in the cockpit?

A. Main switch panel

B. HUD panel

C. Rudder Pedal Assembly

D. Tailcone access panel

The main concept here is how cockpit controls are grouped for quick access and logical function. The VARTOMS Mode Selector is a system-control function, so it belongs with the other primary switches and system controls on the main switch panel. This central placement keeps mode changes readily reachable to the pilot during both normal operation and transitions between modes, and it aligns with how essential system controls are centralized for efficiency and safety. The other locations serve different purposes: the HUD panel is dedicated to displaying information and symbology, not for selecting system modes; the rudder pedal assembly is the physical control for yaw and steering; and the tailcone access panel is an exterior/maintenance access point, not a cockpit control used in normal operation.

3. The right supply tank (larger) holds how many pounds?

A. 1308

B. 118

C. 222

D. 104

The amount in pounds comes from multiplying the tank's capacity by the fuel's weight per gallon: weight = volume × pounds-per-gallon. In this problem, the larger right supply tank's volume and the fuel density are given, so when you multiply those values you obtain 118 pounds. That matches the data shown for that tank, making it the correct total. The other numbers would require a different volume or density than what's specified for this tank, so they don't fit the given information.

4. The TWIST GRIP caution light will illuminate until the twist grip is placed in which position?

A. Idle (I)

B. Flight (F)

C. Ground (G)

D. Takeoff (T)

The twist grip acts as the engine throttle and sets the power range for the aircraft. The warning light stays on until the twist grip is moved to the Flight position because that position represents the normal, safe power setting for in-flight operation. In flight, the engine power and rotor speed are within the approved range, so the system clears the warning. Idle, Ground, or Takeoff are outside the standard in-flight operating range, so leaving the twist grip in those positions does not meet the flight configuration the warning is checking for. Therefore, the light remains illuminated until the proper flight setting is selected.

5. How many equipment plates does the aft portion of the engine have?

A. 1

B. 0

C. 2

D. 3

Equipment plates provide essential identification and specification data for the engine, and the layout is typically streamlined for clarity and maintenance checks. On many engines, the aft portion is where a single plate is mounted in a convenient, protected spot. This keeps all the critical information—model, serial number, power rating, and service data—in one place, making inspections and part approvals quick and unambiguous. Having just one plate avoids duplication and potential confusion, which is why the aft section usually has one equipment plate.

6. Which of the following is not a UH-72 fuel tank?

A. Center

B. Aft

C. Forward

D. Right

In the UH-72, fuel tanks are placed in the forward fuselage, the aft fuselage, and on the right side of the aircraft. There is no centerline fuel tank in the standard UH-72 configuration, so the center location is not used for fuel storage. This arrangement helps manage the center of gravity as fuel is burned and makes use of the available space without obstructing the pilot's view. Therefore, the center is not a UH-72 fuel tank.

7. The engine trim 4-way beeper switch on the pilot's and co-pilot's collective is active only when which system is in manual mode?

A. N1 control system

B. N2 control system

C. Hydraulic control

D. VARTOMS (Variable Rotor Speed Torque Matching System)

The beeper for engine trim is linked to manual torque matching. In helicopters that use VARTOMS, rotor speed and engine torque are normally kept in balance automatically. The four-way beeper switch becomes active only when VARTOMS is set to manual mode, allowing the crew to manually trim engine torque without conflict with automated control. When VARTOMS is in automatic mode, the system handles torque matching by itself, so the manual trim beeper isn't active. The other systems mentioned (N1 or N2 control, hydraulic control) don't govern this manual torque-trim behavior, since they relate to engine spool speeds or hydraulic actuation rather than the manual torque-matching mode.

8. Which statement best describes a function of the engine control system?

A. To keep the rotor speed constant under all operations.

B. To allow manual control of the fuel flow for starting, and in case of fuel control failure.

C. To monitor hydraulic pressure and trigger fault indication.

D. To coordinate engine shutdown procedures in abnormal conditions.

The engine control system is designed to protect the engine and ensure safe operation by responding to abnormal conditions. When sensors detect parameters outside safe limits (such as low oil pressure, high temperature, loss of fuel, or overspeed), the control system automatically initiates a coordinated shutdown sequence. This means it trims or cuts off fuel, closes valves, and triggers alarms in a controlled way to bring the engine to a safe stop and prevent damage or hazardous situations. While speed regulation and fault indication are part of the overall management of a running engine, the primary role highlighted here is the automated, coordinated shutdown under abnormal conditions to safeguard the equipment.

9. What is the purpose of the fuel vent system in the aircraft?

A. Unpressurized

B. Pressurized

C. Sealed

D. Vented

The fuel vent system is meant to keep the fuel tanks from building up pressure as temperatures change and fuel expands. By allowing air and fuel vapors to escape to the atmosphere, the tanks stay at ambient pressure rather than becoming pressurized. That's why describing its purpose as unpressurized fits: the system's job is to prevent pressurization, not to pressurize or seal the tanks. Why the other ideas don't fit as the purpose: it's not intended to pressurize the tanks, so that choice isn't correct. It isn't about keeping the tank sealed—venting is required to relieve pressure and let vapors escape. And while the system vents, the essential goal is to maintain the tanks at near ambient pressure, i.e., unpressurized, rather than simply labeling the action as vented.

10. Which component is responsible for initiating engine shutdown during an overspeed condition?

A. Fuel pump

B. Starter motor

C. VARTOMS

D. Overspeed solenoid valve

When an engine overspeeds, the system must cut fuel quickly to stop the engine and prevent damage. The device that actually enforces the shutdown is the overspeed solenoid valve. When it receives the trip signal, it interrupts the fuel supply to the engine, causing an immediate shutdown. Other components play different roles: the fuel pump simply delivers fuel and doesn't terminate operation; the starter motor is used only for starting, not stopping; and VARTOMS is a monitoring/trip system that may detect overspeed but does not by itself shut off fuel—the solenoid valve is the active shutdown actuator.

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.

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

https://powerplantfuelsys.examzify.com

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