Engines Auxiliary Power Unit (APU) Practice Exam (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

1. **Under what engine condition does the ENG FAIL alert appear within the EGT display?**

   A. **The engine is operating below 50% N2 with the start lever in IDLE.**

   B. **The engine is operating above 50% N2 with the start lever in IDLE.**

   C. **The engine is operating below 50% N2 with the start lever in RUN.**

   D. **The engine is operating above 50% N2 with the start lever in RUN.**

2. **Which electrical buses are shed when the APU is the sole power source in flight?**

   A. **Essential bus only**

   B. **All galley and main buses**

   C. **Avionics bus only**

   D. **Battery and essential bus**

3. **With the start selector switch OFF, auto-relight capability activates both igniters when the EEC detects an engine flameout.**

   A. **EEC detects engine flameout**

   B. **EEC detects engine overtemperature**

   C. **EEC detects high N2**

   D. **EEC detects low fuel pressure**

4. **What is the approximate engine starter cutout speed (as a percent of N2) for the NG?**

   A. **56% N2**

   B. **60% N2**

   C. **52% N2**

   D. **58% N2**

5. **Which statement best describes the APU DOOR light status in flight?**

   A. **APU door not in flight position**

   B. **APU door not in ground position**

   C. **APU door is open**

   D. **APU door is closed**

6. Which indication confirms BRM is active during start on the MAX?

A. MOTORING is displayed on the N2 gauge between 18% and 24% N2

B. N2 gauge shows 0%

C. FUEL FLOW warning

D. APU DOOR light

7. Which condition will cause ignition to both igniters when ignition L/R is selected?

A. CONT

B. GRD

C. FLT

D. IDLE

8. What color is the START VALVE OPEN alert light?

A. Red

B. Amber

C. Green

D. Blue

9. To perform a ground start ignition to the selected igniter, what position should the engine start lever be in?

A. IDLE

B. GRD

C. FLT

D. CONT

10. What combination causes the engine fuel shutoff valve to open?

A. Start lever moved to IDLE and EEC signal to open

B. Start lever moved to IDLE and EEC signal to close

C. Start lever to OFF

D. N2 above 70%

Answers

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

Explanations

1. Under what engine condition does the ENG FAIL alert appear within the EGT display?

A. The engine is operating below 50% N2 with the start lever in IDLE.

B. The engine is operating above 50% N2 with the start lever in IDLE.

C. The engine is operating below 50% N2 with the start lever in RUN.

D. The engine is operating above 50% N2 with the start lever in RUN.

The ENG FAIL alert on the EGT display is a startup fault indication. During start, the engine should spool up to a sufficient speed (N2) while the start lever is in IDLE. If the N2 remains below about 50% with the lever still in IDLE, the system interprets this as a failure to start properly and flags ENG FAIL to warn the crew. Once you move the lever to RUN, the engine is being commanded to run and this particular startup fault condition isn't applicable in the same way; the alert would only appear for an actual failure to reach the required spool while in the idle/start phase. So, the condition that triggers ENG FAIL is the engine being below 50% N2 with the start lever in IDLE.

2. Which electrical buses are shed when the APU is the sole power source in flight?

A. Essential bus only

B. All galley and main buses

C. Avionics bus only

D. Battery and essential bus

When the APU is the only power source, the electrical system prioritizes essential needs and trims away nonessential loads to stay within the APU's capacity. The galley and main buses feed nonessential equipment and general distribution across the aircraft, so disconnecting them reduces the overall electrical load without compromising critical systems. Thus, the buses that are shed are the galley and main buses. The essential and avionics buses (often supported by the battery for standby power if needed) stay powered to maintain flight safety and critical operations. Other options would either keep noncritical loads active or remove more power than necessary, risking essential systems.

3. With the start selector switch OFF, auto-relight capability activates both igniters when the EEC detects an engine flameout.

A. EEC detects engine flameout

B. EEC detects engine overtemperature

C. EEC detects high N2

D. EEC detects low fuel pressure

The key idea is how auto-relight responds to a flameout. When the Engine Electronic Control (EEC) detects that the combustor flame has been lost, it triggers the auto-relight sequence to reignite the engine. With the start selector switch in the OFF position, the system still uses that flameout signal to initiate ignition attempts, and it energizes both igniters to maximize the chance of a successful re-light. Other conditions listed don't indicate a flameout and thus aren't the trigger for auto-relight. An engine overtemperature is a protective fault that leads to cooling or shutdown actions, not a reignition. A high N2 reading is a speed abnormality, not a flame-out signal. Low fuel pressure points to fuel supply issues and may cause problems, but the relight logic relies on actual flameout detection by the EEC rather than this condition alone.

4. What is the approximate engine starter cutout speed (as a percent of N2) for the NG?

A. 56% N2

B. 60% N2

C. 52% N2

D. 58% N2

Starter cutout speed is the point at which the engine's starter automatically disengages after accelerating the high-pressure spool (N2) to a speed where ignition and stable light-off can be achieved. For the Boeing 737 NG with CFM56-7B engines, the design target is in the mid-50s percent N2, with 56% N2 being the typical approximate value used in standard start procedures. This speed provides enough momentum for reliable ignition while protecting the starter from overuse or overspeed. Other options sit outside the usual window: a value around 60% is higher than the common cutout for normal starts, and values around 52% or 58% are not as close to the standard mid-50s target. In practice, environmental factors like temperature and bleed air conditions can shift the exact cutout a notch, but 56% N2 is the representative starting specification for the NG.

5. Which statement best describes the APU DOOR light status in flight?

A. APU door not in flight position

B. APU door not in ground position

C. APU door is open

D. APU door is closed

The APU door light tells you whether the APU door is in its proper position for flight. In flight, the APU isn't being used, and the door must be kept in the position appropriate for flight. The indicator is described in terms of whether the door is in that flight position; therefore the best description of the light in flight is that the APU door is not in flight position. The other options refer to specific states (open/closed) or ground positioning, which aren't the way this light is described in flight.

6. Which indication confirms BRM is active during start on the MAX?

A. MOTORING is displayed on the N2 gauge between 18% and 24% N2

B. N2 gauge shows 0%

C. FUEL FLOW warning

D. APU DOOR light

During an APU start on the MAX, the BRM controls the initial phase where the starter motor spins the APU compressor before any ignition occurs. The best indication that BRM is active is when the N2 gauge shows the label "MOTORING" in the range around 18% to 24% N2. This tells you the APU is being driven by the starter and is not yet firing or producing bleed air; it's in the pre-ignition motoring stage managed by BRM. If N2 were at 0%, there'd be no rotation at all, so BRM wouldn't be indicating motoring. A fuel flow warning would appear only after ignition and fuel is being burned, not during motoring. The APU door light relates to the door position and isn't a direct indicator of BRM activity.

7. Which condition will cause ignition to both igniters when ignition L/R is selected?

A. CONT

B. GRD

C. FLT

D. IDLE

Ignition control is designed for redundancy and reliability across different operating states. When the system is in flight mode, the logic is set to energize both igniters to maximize the chance of a successful ignition under harsher conditions such as higher airflow and more variable environment. Even if you have selected a specific igniter (left or right), flight mode overrides that to fire both sparks for robustness. The other modes serve different purposes—continuous ignition simply keeps sparks on, while ground and idle modes typically use only the selected igniter to save power and reduce wear. So the condition that makes both igniters fire is flight.

8. What color is the START VALVE OPEN alert light?

A. Red

B. Amber

C. Green

D. Blue

Ambers are used for cautionary indications that something is happening you need to monitor, not a fault that demands immediate action. The START VALVE OPEN alert light signals that the air-start valve has opened to allow bleed air during the start sequence. That opening is a normal, progress-step event, so the amber light appropriately flags you to observe the status without implying a failure. If it were red, that would imply a fault; green would imply a normal, steady state rather than a transient start condition; blue is used for other informational cues and isn't the standard color for this start-effort indication.

9. To perform a ground start ignition to the selected igniter, what position should the engine start lever be in?

A. IDLE

B. GRD

C. FLT

D. CONT

Beginning a ground start requires the ignition system to light off as the starter brings the engine up from zero. Putting the engine start lever in idle sets the ignition circuit for the selected igniter and allows the fuel-air mixture to ignite as the compressor spool increases from rest. The other positions are for different phases of operation (flight or continuous ignition) and do not provide the proper light-off sequence needed for a fresh ground start. So, the correct practice is to have the start lever in idle to perform a ground start ignition to the chosen igniter.

10. What combination causes the engine fuel shutoff valve to open?

A. Start lever moved to IDLE and EEC signal to open

B. Start lever moved to IDLE and EEC signal to close

C. Start lever to OFF

D. N2 above 70%

Fuel shutoff valve opening is controlled by a manual and an electronic signal working together. When you move the start lever to IDLE, you're indicating the engine is in the start phase and fuel delivery is being considered. The Electronic Engine Control then must actively command the valve to open to permit fuel flow. If the lever is in OFF, the valve stays closed regardless of what the EEC says. If the EEC signals to close, it won't open the valve. A high N2 by itself isn't enough to open the valve, since ignition/fuel flow requires both the correct lever position and an EEC authorisation. Therefore, the valve opens only when the start lever is in IDLE and the EEC signals to open.

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://enginesapu.examzify.com

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