TURBINE OVERHAUL (OH) TEST 1 PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. Which tool is used for dimensional inspection?

A. Ultrasonic

B. Micrometers, T-gauges, feeler gauges, go/no-go gauges, and dial indicators

C. X-ray

D. Visual inspection

2. Which statement about the relationship between temperature, time, and inspection scope for over-temp events is correct?

A. Only the peak temperature matters

B. Both the peak temperature reached and the duration determine the inspection scope, guided by the Maintenance Manual charts

C. Only the duration matters

D. The inspection scope is fixed regardless of conditions

3. What is the primary purpose of cleaning?

A. Remove deposits which adversely affect operation.

B. Permit a thorough inspection.

C. Prepare surface for repair (welding, plating, etc.)

D. Remove coatings in order to permit inspection of base material.

4. To determine the scope of an over-temperature inspection, which reference should be consulted?

A. Pilot's operating handbook

B. Equipment warranty documentation

C. Service life records

D. Charts in the Maintenance Manual

5. Is it true that 70-80% of performance loss in an operating gas turbine can be attributed to compressor fouling?

A. False

B. True

C. Only in old engines

D. Depends on operating conditions

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6. What is the definition of erosion in a gas turbine context?

A. Corrosion due to chemical reactions

B. The wearing away of surfaces by the impact of solid particles in the flow path

C. Fatigue due to cyclic loads

D. Thermal expansion differences

7. After performing FPI, which action might be required if necessary?

A. Documentation

B. Rebalance the blade

C. Polish area

D. Clean blade

8. In re-assembly after overhaul, what is the correct order of steps?

A. Follow approved overhaul manual; Ensure proper torque and safety of all bolts, nuts and other fasteners; Cleanliness during re-assembly is crucial!!

B. Cleanliness during re-assembly is crucial!!; Follow approved overhaul manual; Ensure proper torque and safety of all bolts, nuts and other fasteners.

C. Ensure proper torque and safety of all bolts, nuts and other fasteners; Cleanliness during re-assembly is crucial!!; Follow approved overhaul manual.

D. Follow approved overhaul manual; Cleanliness during re-assembly is crucial!!; Ensure proper torque and safety of all bolts, nuts and other fasteners.

9. X-ray inspection is recommended for which parts?

A. All fasteners only

B. Critical parts, e.g., engine mounts, and after welded repair

C. Internal lubricants

D. Exterior surfaces

10. During hot section disk inspection, what is the consequence of finding any cracks?

A. Any cracks reject wheel.

B. Cracks require dye-pen inspection.

C. Cracks may be filed and reused.

D. Cracks are recorded and monitored without rejection.

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Answers

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

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Explanations

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1. Which tool is used for dimensional inspection?

A. Ultrasonic

B. Micrometers, T-gauges, feeler gauges, go/no-go gauges, and dial indicators

C. X-ray

D. Visual inspection

Dimensional inspection relies on instruments that quantify sizes, gaps, and tolerances rather than just assess appearance. The best option brings together a range of precise measuring tools: micrometers for accurate outside dimensions, T-gauges for specific dimensional checks, feeler gauges for clearances, go/no-go gauges to quickly verify whether a feature stays within tolerance, and dial indicators to measure runout, alignment, or small displacements. This combination provides actual measurements or clear pass/fail decisions, which is what dimensional inspection is all about. Ultrasonic testing is mainly for detecting internal flaws and measuring thickness in some contexts, not for general size verification. X-ray reveals internal geometries but isn't a standard dimensional inspection tool. Visual inspection assesses appearance and surface defects but doesn't provide precise measurements.

2. Which statement about the relationship between temperature, time, and inspection scope for over-temp events is correct?

A. Only the peak temperature matters

B. Both the peak temperature reached and the duration determine the inspection scope, guided by the Maintenance Manual charts

C. Only the duration matters

D. The inspection scope is fixed regardless of conditions

When evaluating over-temp events, how hot it gets and how long it stays hot both drive the potential for damage. A very high peak temperature can cause immediate surface or material changes, while longer exposure allows more time for diffusion, creep, oxidation, and other degradation processes. Because of this, the inspection needs depend on both factors, not just one. The Maintenance Manual charts are there to translate the combination of peak temperature and duration into the required inspection scope. As either the peak temperature rises or the time at elevated temperature lengthens, the charts typically escalate the amount and kinds of inspection—expanding the areas or components checked, and sometimes increasing the rigor of nondestructive tests. If you only consider peak temperature, you might miss damage from a prolonged but moderately hot event. If you only consider duration, a very short but extremely hot spike could be undervalued. By using both measurements together, the inspection scope accurately reflects the actual risk from the over-temp event.

3. What is the primary purpose of cleaning?

A. Remove deposits which adversely affect operation.

B. Permit a thorough inspection.

C. Prepare surface for repair (welding, plating, etc.)

D. Remove coatings in order to permit inspection of base material.

Removing deposits and contaminants that affect operation is the main purpose of cleaning. When deposits such as scale, ash, oil, grease, or corrosion by-products are present, they can block cooling passages, alter clearances, reduce heat transfer, and cause abnormal wear. Cleaning restores surfaces to their normal condition, ensuring proper fit, lubrication, and performance, and it also enables accurate inspection afterward. While cleaning can also prepare surfaces for inspection or repair or remove coatings to inspect the base material, these are subsequent steps made possible by removing the deposits first.

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4. To determine the scope of an over-temperature inspection, which reference should be consulted?

A. Pilot's operating handbook

B. Equipment warranty documentation

C. Service life records

D. Charts in the Maintenance Manual

The key idea is that after a temperature excursion, the official maintenance documentation sets the exact scope of what must be inspected. Charts in the Maintenance Manual specify which components and areas to check, how far to disassemble, and what tests or criteria to apply to verify integrity. They are the authoritative source for determining the required inspection extent because they are written to reflect how temperature events affect the turbine and to standardize the corrective actions across similar situations. The pilot's operating handbook focuses on flight procedures, not maintenance scope. Service life records show how long parts have been in service but don't prescribe inspection extent after an over-temperature event. Warranty documents cover terms and coverage rather than inspection criteria. So, consulting the charts in the Maintenance Manual provides the correct guidance for scope.

5. Is it true that 70-80% of performance loss in an operating gas turbine can be attributed to compressor fouling?

A. False

B. True

C. Only in old engines

D. Depends on operating conditions

Compressor fouling is the main driver of performance loss in a running gas turbine because it directly increases the aerodynamic losses and reduces the pressure ratio the engine can achieve. When the compressor blades and passages accumulate dust, oil, or other deposits, the pressure drop across the compressor rises and its efficiency falls, which translates into less mass flow and a lower overall cycle efficiency. In practice, analyses and maintenance experiences often show that about 70-80% of the total performance degradation seen in a tired engine comes from the compressor side, making this statement a useful general rule. The exact share can vary with engine design, operating conditions, and the level of fouling, but the compressor typically dominates the loss. Cleaning or refurbishing the compressor tends to yield the most significant performance recovery, reinforcing why fouling is identified as the primary contributor.

6. What is the definition of erosion in a gas turbine context?

A. Corrosion due to chemical reactions

B. The wearing away of surfaces by the impact of solid particles in the flow path

C. Fatigue due to cyclic loads

D. Thermal expansion differences

Erosion in a gas turbine is the wearing away of surfaces caused by solid particles carried in the flow and striking components at high speed. As air and fuel streams move through the engine, particulates such as dust, sand, or ash can collide with turbine blades and other surfaces. Each impact removes tiny amounts of material, creating pits and roughness that thin surfaces and degrade aerodynamic performance over time. This is a mechanical process, not chemical: it's not about reactions with the environment (that would be corrosion). It's also distinct from fatigue, which comes from cyclic stresses and crack growth, and from thermal expansion differences, which create stresses but not direct material loss from particle impacts. Erosion depends on particle hardness, size, velocity, concentration, and the angle of impact, with harder particles at higher velocities causing more wear.

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7. After performing FPI, which action might be required if necessary?

A. Documentation

B. Rebalance the blade

C. Polish area

D. Clean blade

FPI reveals surface flaws, and any required repair that changes a blade's mass distribution can upset rotor balance. If material is removed or a blade is otherwise modified to fix a flaw, restoring the blade's dynamic balance is necessary to prevent vibration and stress during operation. That's why rebalancing the blade is the action that might be required. Documentation and post-inspection cleanup steps are important parts of the process, but they don't directly restore balance; polishing or cleaning aren't the primary actions driven by FPI results.

8. In re-assembly after overhaul, what is the correct order of steps?

A. Follow approved overhaul manual; Ensure proper torque and safety of all bolts, nuts and other fasteners; Cleanliness during re-assembly is crucial!!

B. Cleanliness during re-assembly is crucial!!; Follow approved overhaul manual; Ensure proper torque and safety of all bolts, nuts and other fasteners.

C. Ensure proper torque and safety of all bolts, nuts and other fasteners; Cleanliness during re-assembly is crucial!!; Follow approved overhaul manual.

D. Follow approved overhaul manual; Cleanliness during re-assembly is crucial!!; Ensure proper torque and safety of all bolts, nuts and other fasteners.

Proper sequencing of re-assembly steps is essential: first follow the approved overhaul manual to ensure you perform the steps in the right order; next verify that all bolts, nuts, and fasteners are torqued to specification and are safe; finally maintain cleanliness during re-assembly as a final check to prevent contamination and ensure proper seating and operation. Following the manual first guarantees you're using the correct procedures and the intended order, which is critical for tool use, clearances, and compatibility. Verifying torque and fastener safety next ensures the assembly will hold together under operating conditions. Emphasizing cleanliness last reinforces that any debris or contaminants can compromise seals, clearances, and fastener integrity, undermining the work already done. Other sequences either place cleanliness before following the procedure or torque checks, which can allow improper steps or contaminated parts to be used, and that undermines the reliability of the overhaul.

9. X-ray inspection is recommended for which parts?

A. All fasteners only

B. Critical parts, e.g., engine mounts, and after welded repair

C. Internal lubricants

D. Exterior surfaces

X-ray inspection targets hidden internal flaws in critical components and welded joints, not external surfaces or liquids. It's essential for parts whose failure would have serious consequences, such as engine mounts that bear major loads and connect to other structures. After welded repairs, radiography verifies that the weld has proper fusion and is free of hidden cracks or porosity, ensuring the repair is sound before the part goes back into service. This focused use is why the best answer is that X-ray inspection is recommended for critical parts and after welded repairs.

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10. During hot section disk inspection, what is the consequence of finding any cracks?

A. Any cracks reject wheel.

B. Cracks require dye-pen inspection.

C. Cracks may be filed and reused.

D. Cracks are recorded and monitored without rejection.

Cracks in hot-section disks are unacceptable because these parts operate under high temperature and extreme rotational stresses; even a small flaw can grow under service and cause a catastrophic, uncontained rotor failure. Safety dictates that any detected crack results in rejecting the wheel and replacing it. Dye-penetrant inspection is simply a detection method, not a fix—if a crack is found, the part isn't salvaged. Filing or reworking a cracked disk would only weaken it further, and recording and monitoring without rejection would ignore a critical safety defect.

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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://turbineoverhaul1.examzify.com

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

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