

Junior Officer Surface Material Readiness Course 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 does the Fuel System Icing Inhibitor test measure?**
 - A. Percentage of FSII in JP-5**
 - B. FSII concentration in PPM**
 - C. FSII mass in grams**
 - D. Proportion of water in fuel**

- 2. A reading of 60 drops in 5 minutes would be categorized as which?**
 - A. GT running leakage**
 - B. GT leakage**
 - C. GT seepage**
 - D. Weepage**

- 3. DFWD stands for which device?**
 - A. Digital free water detector**
 - B. Direct free water device**
 - C. Dynamic free water detector**
 - D. Digital free weight detector**

- 4. Cloud Point is the temperature at which fuel becomes hazy due to what?**
 - A. Wax Crystals Forming**
 - B. Water Boiling**
 - C. Vapor Pressure Increase**
 - D. Color Fading**

- 5. Which term is used to describe how easily a liquid flows under gravity conditions?**
 - A. Viscosity**
 - B. Cloud Point**
 - C. Wicking**
 - D. Demulsification**

- 6. During soot blow, which action helps prevent fouling the flight deck?**
- A. Drive to avoid fouling the flight deck**
 - B. Increase speed to maximum**
 - C. Stop operation**
 - D. Ignore debris**
- 7. Which statement correctly describes 90 degrees in the guideline?**
- A. Watch greater than 4 hours**
 - B. Watch equal to 2 hours**
 - C. Watch less than 1 hour**
 - D. No watch required**
- 8. Weepage definition is:**
- A. Visible sheen**
 - B. A loss of fluid that forms a pool**
 - C. Loss of fluid that collects slowly causing surface wetting**
 - D. No leakage present**
- 9. Water wash interval for GTM engines is between which hours?**
- A. 75-100 hours**
 - B. 50-60 hours**
 - C. 150-200 hours**
 - D. 25-40 hours**
- 10. Which document represents the Master level casualty response procedures?**
- A. Master Casualty Response Procedure**
 - B. Casualty Response Procedure**
 - C. Master Emergency Procedure**
 - D. Emergency Procedure**

Answers

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

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Explanations

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1. What does the Fuel System Icing Inhibitor test measure?

- A. Percentage of FSII in JP-5**
- B. FSII concentration in PPM**
- C. FSII mass in grams**
- D. Proportion of water in fuel**

The test is about how much anti-icing additive is in the fuel, expressed as a percentage of the total fuel. Fuel System Icing Inhibitor (FSII) is mixed into JP-5 to prevent ice from forming in the fuel system, especially when water is present. Verifying the FSII amount by percent by volume ensures the fuel batch has the right protection level, regardless of how much fuel you have. Expressing the concentration as percent by volume matches how the specification sets acceptance limits and keeps the measure directly tied to the fuel mix. Using concentration in parts per million would be more cumbersome for the typical FSII ranges and doesn't reflect the overall fuel-portion proportion the specification uses, while measuring FSII mass in grams would depend on the total batch mass. The test focuses on the FSII amount, not the water content itself, so the proportion of water isn't what this test reports.

2. A reading of 60 drops in 5 minutes would be categorized as which?

- A. GT running leakage**
- B. GT leakage**
- C. GT seepage**
- D. Weepage**

Understanding how leakage is classified by rate and operating condition helps you interpret readings. When a leak is measured, the rate at which fluid drips indicates both the severity and whether the system is leaking while it is in operation. A reading of 60 drops in 5 minutes works out to about 12 drops per minute, showing a steady, visible flow rather than a tiny, intermittent seep. That level of leakage aligns with running leakage—leakage that persists while the equipment is operating and is noticeable as a continuous flow. Seepage and weepage describe much slower escape through minor flaws or porous surfaces, typically observed at a much lower rate and not tied to the equipment actively running. So, a 60-drop in 5-minute reading is best categorized as running leakage.

3. DFWD stands for which device?

- A. Digital free water detector**
- B. Direct free water device**
- C. Dynamic free water detector**
- D. Digital free weight detector**

DFWD refers to a device that monitors fuel for the presence of free water. Free water is liquid water that separates from fuel and can accumulate in tanks or lines, posing risks like corrosion, microbial growth, and fuel system malfunction. A detector like this uses sensors to sense water and then provides a digital signal or readout, often with alarms, so the crew can take action to drain or filter the water before it causes problems. The “digital” part is key because it implies a processed electronic output rather than a purely mechanical or analog indication, enabling clear displays or automated alerts. The term matches the acronym by combining Digital, Free Water, and Detector. The other phrasing would imply different concepts (direct, dynamic, or a weight measurement) that do not describe detecting free water in fuel.

4. Cloud Point is the temperature at which fuel becomes hazy due to what?

- A. Wax Crystals Forming**
- B. Water Boiling**
- C. Vapor Pressure Increase**
- D. Color Fading**

Cloud point is the temperature at which paraffin waxes in the fuel begin to crystallize and form tiny wax crystals. When the fuel cools enough, these crystals precipitate out and scatter light, giving the fuel a hazy appearance. This haziness comes from the wax crystals, not from water, vapor pressure, or color changes. Water boiling would produce steam, higher vapor pressure relates to volatility, and color fading is a visual change from dyes or additives, not crystal formation.

5. Which term is used to describe how easily a liquid flows under gravity conditions?

- A. Viscosity**
- B. Cloud Point**
- C. Wicking**
- D. Demulsification**

Viscosity is the measure of a liquid's resistance to flow due to internal friction between its molecules. When a liquid flows under gravity, how easily it pours depends on this property: lower viscosity means it flows readily, while higher viscosity means it resists flow and moves more slowly. This concept is key for predicting how fuels, lubricants, paints, and other liquids will behave when poured, pumped, or sprayed. Cloud point is about the temperature at which dissolved solids form a cloudy phase in a liquid, not about flow under gravity. Wicking describes how liquid moves through porous materials via capillary action, not gravity-driven flow in an open environment. Demulsification refers to separating an emulsion into distinct liquid phases, which is a separation process, not a measure of flow rate.

6. During soot blow, which action helps prevent fouling the flight deck?

- A. Drive to avoid fouling the flight deck**
- B. Increase speed to maximum**
- C. Stop operation**
- D. Ignore debris**

During soot blowing, a plume of soot and debris can drift downwind and settle on exposed surfaces like the flight deck. The best way to prevent fouling is to maneuver the ship so the flight deck stays out of the soot plume, effectively positioning the deck away from the area being cleaned. This keeps the deck cleaner without interrupting the operation. Increasing speed can alter air flow oddly and may spread debris rather than prevent it. Stopping the operation stops the cleaning but doesn't stop debris from already being blown or from continuing to blow. Ignoring debris is unsafe and would let fouling happen.

7. Which statement correctly describes 90 degrees in the guideline?

- A. Watch greater than 4 hours**
- B. Watch equal to 2 hours**
- C. Watch less than 1 hour**
- D. No watch required**

This question tests how the guideline translates a 90-degree reading into a watch-time action. In this guideline, angular indicators are used as thresholds that tell you how long a crew member should be on watch to manage risk. A 90-degree reading is a strong, high-severity cue, so the instruction is to keep watch for more than four hours. That is why describing 90 degrees as requiring a watch greater than four hours is the most consistent interpretation of the guideline. The other time options (two hours, less than one hour) don't align with the severity implied by a 90-degree angle, and no watch would ignore a detectable cue.

8. Weepage definition is:

- A. Visible sheen**
- B. A loss of fluid that forms a pool**
- C. Loss of fluid that collects slowly causing surface wetting**
- D. No leakage present**

Weepage is the slow migration of fluid to the surface that shows up as a visible film or sheen on the surface. The key idea is that you're seeing a thin, continuous layer of liquid spread across the exterior, rather than a puddle or just a tiny wet spot. A pool would indicate a larger amount of leakage collecting on the surface, which isn't what we're describing with weepage. Surface wetting can occur from small amounts, but the defining sign of weepage is that visible film or sheen. No leakage present would be incorrect because weepage by definition involves leakage to the surface.

9. Water wash interval for GTM engines is between which hours?

- A. 75-100 hours**
- B. 50-60 hours**
- C. 150-200 hours**
- D. 25-40 hours**

Water wash is done to keep the compressor clean and restore engine efficiency by removing deposits, salt, and oil that build up on the compressor blades. If these contaminants aren't cleaned regularly, compressor performance degrades, fuel consumption rises, and the risk of surge increases. For GTM engines, the typical interval of 75-100 hours provides a practical balance: it keeps the compressor clean enough to maintain performance without causing excessive downtime or washing costs. Intervals shorter than that, like 50-60 hours, would lead to unnecessary maintenance and downtime. Intervals much longer, such as 150-200 hours, increase the chance of performance loss and harder-to-remove buildup before the next wash. The 75-100 hour range is the standard recommendation that keeps the engine operating reliably between washes, with adjustments only for harsher environments or higher duty cycles.

10. Which document represents the Master level casualty response procedures?

- A. Master Casualty Response Procedure**
- B. Casualty Response Procedure**
- C. Master Emergency Procedure**
- D. Emergency Procedure**

Understanding how casualty response documents are named helps you pick the right one. The document that represents the highest-level, organization-wide plan for handling casualties is the Master Casualty Response Procedure. The word "Master" signals this is the top-tier guide that sets policies, assigns responsibilities, and coordinates how all casualty actions fit together. It provides the overarching framework that subordinate, more specific casualty procedures follow. Options that omit "Master" are lower-level documents that describe particular steps or scenarios, not the overarching plan. Replacing "Casualty Response" with "Emergency" broadens the scope to all emergencies rather than focusing specifically on casualties, so it wouldn't be the master casualty plan.

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://jrofficersurfacematreadiness.examzify.com>

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

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