AVIATION BOATSWAIN'S MATE – FUELS (ABF) PRACTICE EXAM (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 of the following is the second specification listed for the Aurora JP-5 service pump?

A. Double suction, single stage

B. 1100 gpm at 150 psi

C. 20 foot suction lift

D. None of the above

2. The cla-val functions as a pressure-reducing valve to maintain a constant discharge pressure not to exceed what psi?

A. 55

B. 40

C. 60

D. 70

3. What is the rated pressure for a rotary vane stripping pump?

A. 30 gpm at 40 psi

B. 100 gpm at 60 psi

C. 60 gpm at 75 psi

D. 50 gpm at 50 psi

4. If the delivery pressure is 60 psi, what is the defuel valve relief setting?

A. 60 psi

B. 57 psi

C. 67.5 psi

D. 68 psi

5. The bottom of the body is attached to the inlet by how many ball bearings?

A. 29

B. 39

C. 49

D. 59

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6. Within the CCFD, how often must the standard cards be replaced?

A. 6 months

B. 3 months

C. 12 months

D. 1 month

7. In the CLA-Val the fuel valve pressure relief control valve psi will be set how much higher than the delivery pressure?

A. 5 psi

B. 2-1/2 psi

C. 7-1/2 psi

D. 0 psi

8. The maximum spring tension adjustment for the pressure relief control valves is?

A. 60 psi

B. 70 psi

C. 50 psi

D. 40 psi

9. What disk provides a rotating casing for the centripetal pump?

A. Paring disk

B. Spacer disk

C. Throttle disk

D. Tracking disk

10. During inspection of fuel hoses, which condition is a definite replacement trigger?

A. A slight color change on the outer jacket

B. A minor bend within the acceptable radius

C. Any exposed hose reinforcement material

D. A small dent in the hose cover

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Answers

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

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Explanations

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1. Which of the following is the second specification listed for the Aurora JP-5 service pump?

A. Double suction, single stage

B. 1100 gpm at 150 psi

C. 20 foot suction lift

D. None of the above

In pump specs, the second line of data usually presents performance — how much fluid the pump can move and under what pressure. For the Aurora JP-5 service pump, the measured performance shown as a flow rate at a given pressure communicates its primary operational capability: it can deliver 1100 gallons per minute while maintaining 150 psi. This pairing of volume (gpm) and pressure (psi) is what you need to assess whether the pump meets system requirements, because fuel transfer must happen quickly enough (high enough gpm) without dropping below the needed pressure to push through hoses, filters, and fittings. The other options describe the pump's design or a suction-head characteristic rather than its immediate performance under load, and those aspects are typically listed separately or at different points in the spec sheet.

2. The cla-val functions as a pressure-reducing valve to maintain a constant discharge pressure not to exceed what psi?

A. 55

B. 40

C. 60

D. 70

The CLA-VAL acts as a pressure-reducing valve to keep the discharge line at a constant pressure despite changes in upstream pressure or flow demand. It does this with a diaphragm and pilot mechanism that senses the downstream (discharge) pressure and automatically throttles the flow to maintain that set point. In aviation fueling, this downstream pressure is chosen to provide reliable fuel flow through hoses and aircraft nozzles while protecting equipment from over-pressurization. The standard discharge set point is 55 psi, so the valve is calibrated to hold the line at that pressure. If upstream pressure rises, the valve closes slightly to hold 55 psi; if more flow is needed, it opens to maintain the same downstream pressure. Values higher than 55 would push the discharge beyond what's intended for safe and consistent fueling, while a much lower value would reduce flow too much. So 55 psi is the target discharge pressure.

3. What is the rated pressure for a rotary vane stripping pump?

A. 30 gpm at 40 psi

B. 100 gpm at 60 psi

C. 60 gpm at 75 psi

D. 50 gpm at 50 psi

Stripping pumps have a defined operating point on their performance curve: the flow you get at a given discharge pressure. For a rotary vane stripping pump used in ABF, this intended point is about 50 gpm at 50 psi. That combination gives enough flow to move residual fuel quickly while keeping the discharge pressure at a level safe for hoses, fittings, and the surrounding system. If you push for more pressure, the pump's flow falls off and you risk over-pressurizing components; if you try to push more flow at a lower pressure, the removal becomes inefficient and takes longer. The 50 gpm at 50 psi pairing balances speed and system safety, making it the standard rating for this pump.

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4. If the delivery pressure is 60 psi, what is the defuel valve relief setting?

A. 60 psi

B. 57 psi

C. 67.5 psi

D. 68 psi

The defuel valve relief setting is designed to stay closed during normal delivery pressure and only open when pressure climbs high enough to risk damage. To create that safety margin, the relief is set above the normal delivery pressure—typically at 1.125 times the delivery pressure. With a delivery pressure of 60 psi, multiply by 1.125: 60 × 1.125 = 67.5 psi. So the correct relief setting is 67.5 psi, providing about a 12.5% cushion for any surges or line losses.

5. The bottom of the body is attached to the inlet by how many ball bearings?

A. 29

B. 39

C. 49

D. 59

The question tests how the rotating assembly is supported and kept aligned. Between the bottom of the body and the inlet, ball bearings are used to provide a smooth, low-friction connection while maintaining precise alignment. The number of bearings is selected to distribute load evenly, control vibration effects, and preserve the correct clearance for seals and lubrication. In this unit, the design uses a specific, mid-range count of bearings to balance stability and practicality. Too few bearings would overload the bearing faces and risk misalignment and wear; too many would add unnecessary weight and complexity, potentially affecting sealing and lubrication. The chosen count therefore reflects the standard specification for reliable operation under expected conditions.

6. Within the CCFD, how often must the standard cards be replaced?

A. 6 months

B. 3 months

C. 12 months

D. 1 month

The standard cards in the CCFD are reference data you rely on for accurate fuel calculations and recordkeeping. They contain fixed values used when determining quantities, densities, temperature corrections, and related properties during fueling operations. Over time these values can drift or become outdated due to procedure changes, new fuel specifications, or hardware updates. Replacing the standard cards on a regular six-month schedule keeps the reference data current, ensures QA validation, and fits with typical maintenance and auditing cycles. Choosing a shorter interval would add unnecessary workload without meaningful gains because the data remains stable most of the time. Waiting longer than six months risks using outdated information that could affect measurement accuracy and record integrity.

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7. In the CLA-Val the fuel valve pressure relief control valve psi will be set how much higher than the delivery pressure?

A. 5 psi

B. 2-1/2 psi

C. 7-1/2 psi

D. 0 psi

The key idea is that the CLA-Val's fuel valve relief control valve is designed to open only when the system pressure exceeds the delivery pressure by a small, fixed amount. This keeps the system at the intended delivery pressure with minimal waste and smooth operation. The correct setting is two and a half psi above the delivery pressure. This small differential allows the valve to stay closed during normal operation and only relieve when a slight overpressure occurs, preventing larger fluctuations or chatter. Setting a larger differential would cause unnecessary relief and instability, while zero differential would cause the valve to open too readily.

8. The maximum spring tension adjustment for the pressure relief control valves is?

A. 60 psi

B. 70 psi

C. 50 psi

D. 40 psi

In a pressure relief control valve, the spring holds the valve closed until system pressure overcomes the spring force, so the spring tension directly sets the relief (crack) pressure. There is a design limit for how high that tension can be adjusted to safely relieve at a specific maximum pressure. For this fuel system, the upper limit is 70 psi. Setting the spring to this maximum ensures relief occurs before pressures reach levels that could harm tanks, pumps, or lines, while not venting too early and wasting fuel. If you were to go higher than 70 psi, relief would be delayed past the safe limit, risking overpressure; if you set it lower, you'd vent too soon, reducing efficiency and potentially causing fuel loss.

9. What disk provides a rotating casing for the centripetal pump?

A. Paring disk

B. Spacer disk

C. Throttle disk

D. Tracking disk

The rotating boundary for a centripetal pump is formed by the paring disk. This precision disk is mounted with the rotor and acts as the moving outer surface of the pump chamber, establishing the exact clearance between the rotating parts and the stationary housing. That rotating boundary is essential for defining the flow path and maintaining efficient pumping, as it controls leakage and slip by keeping a tight, consistent gap as the rotor spins. The other disks have different roles: the spacer disk sets the axial distance between components, the throttle disk adjusts flow by restricting the passage, and the tracking disk helps with alignment or motion guidance.

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10. During inspection of fuel hoses, which condition is a definite replacement trigger?

A. A slight color change on the outer jacket

B. A minor bend within the acceptable radius

C. Any exposed hose reinforcement material

D. A small dent in the hose cover

When inspecting fuel hoses, maintaining structural integrity is the top priority. A hose is built with an inner liner, reinforcement, and an outer jacket; the reinforcement provides the primary strength to handle fuel pressure. If the reinforcement material is exposed, the protective outer layer has failed and the hose can no longer contain pressure or resist leaks. That exposure means the hose must be replaced to prevent fuel leakage and possible fire. Other indicators—such as a slight color change on the outer jacket, a minor bend within the acceptable radius, or a small dent in the hose cover—do not by themselves mandate replacement. A color change may reflect aging or contamination but doesn't automatically compromise the reinforcement. A bend within the allowed radius remains within tolerance, and a small dent may be superficial unless accompanied by other damage.

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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:

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

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