

MESA ENTRANCE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://mesaentrance.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	14

SAMPLE

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

SAMPLE

1. What is 0800 in 12-hour format?
 - A. 8:00 AM
 - B. 7:00 AM
 - C. 9:00 AM
 - D. 10:00 AM
2. What condition makes a function $g: R \rightarrow R$ invertible?
 - A. The function must be surjective
 - B. The function must be injective (one-to-one)
 - C. The function must be continuous
 - D. The function must be differentiable
3. A rectangle has length 8 and width w . If the area is 72, find w .
 - A. 8
 - B. 6
 - C. 9
 - D. 12
4. Which acronym stands for the device that provides electrical power on the ground?
 - A. FAA
 - B. FAK
 - C. GPU
 - D. FLT
5. What is the 24-hour representation of 7:00 AM?
 - A. 0500
 - B. 0900
 - C. 0700
 - D. 1200
6. Which acronym corresponds to Federal Aviation Regulation?
 - A. FAA
 - B. FO
 - C. FAR
 - D. GPU

7. The circumference of a circle is $2\pi r$. If $r = 5$, what is the circumference?

- A. 5π
- B. 10π
- C. 20π
- D. 2π

8. VSI stands for which term?

- A. Weather
- B. Weight
- C. Visual Service Indicator
- D. Regular Reserve

9. What is the 24-hour time for 5:00 PM?

- A. 1600
- B. 1800
- C. 1700
- D. 1500

10. The circumference of a circle is $2\pi r$. If $r = 2$, what is the circumference?

- A. 4π
- B. 2π
- C. 8π
- D. π

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is 0800 in 12-hour format?

- A. 8:00 AM**
- B. 7:00 AM
- C. 9:00 AM
- D. 10:00 AM

In the 24-hour clock, the first two digits show the hour. 08 means eight o'clock, and since this time is before noon, it falls in the AM period. So 0800 is 8:00 AM. The other options would correspond to 07:00, 09:00, or 10:00 in the morning, not 8:00.

2. What condition makes a function $g: \mathbb{R} \rightarrow \mathbb{R}$ invertible?

- A. The function must be surjective
- B. The function must be injective (one-to-one)**
- C. The function must be continuous
- D. The function must be differentiable

The main idea is that an inverse function exists only when each output comes from a unique input. That one-to-one (injective) property guarantees that you can unambiguously recover the original input from the output. If a function assigns the same value to two different inputs, there isn't a single preimage for that output, so you can't define a single inverse value as a function. For example, x^2 maps both 1 and -1 to 1, so it cannot have a proper inverse on all of $\mathbb{R}$. On the other hand, a function like x^3 assigns each real number to a unique real number, so it has an inverse. Continuity or differentiability don't ensure invertibility, because they don't prevent multiple inputs from producing the same output. Surjectivity would guarantee that every real number is hit, but even then you'd still need injectivity to have a well-defined inverse function.

3. A rectangle has length 8 and width w . If the area is 72, find w .

- A. 8
- B. 6
- C. 9**
- D. 12

The area of a rectangle is found by multiplying its length by its width. With area 72 and length 8, set up $72 = 8 \times w$. Solve for w by dividing both sides by 8: $w = 72 \div 8 = 9$. This works because 8×9 equals 72. Checking other values shows they don't produce 72 (for example, 8 gives 64, 6 gives 48, 12 gives 96), so the width must be 9.

4. Which acronym stands for the device that provides electrical power on the ground?

- A. FAA
- B. FAK
- C. GPU**
- D. FLT

The device that provides electrical power for an aircraft while it's on the ground is called a Ground Power Unit, abbreviated as GPU. It supplies the aircraft with the necessary electrical power—often 400 Hz AC or DC power—so systems like lights, avionics, air conditioning, and preflight equipment can run without starting the engines or the APU. GPUs are used during preflight checks, maintenance, and boarding to keep everything powered safely on the ramp. The other terms shown aren't devices that power the aircraft on the ground: FAA is the Federal Aviation Administration, the regulatory body; FLT is shorthand for flight; FAK isn't a standard aviation power device. So GPU is the correct match for the ground power source.

5. What is the 24-hour representation of 7:00 AM?

- A. 0500
- B. 0900
- C. 0700**
- D. 1200

In the 24-hour clock, hours run from 00 to 23, with a leading zero for single-digit hours. Times before noon keep the same hour value, just written as two digits. So 7:00 AM becomes 07:00, written without a colon as 0700. The other options correspond to 5:00 AM (0500), 9:00 AM (0900), and noon (1200). Therefore, the 24-hour representation is 0700.

6. Which acronym corresponds to Federal Aviation Regulation?

- A. FAA
- B. FO
- C. FAR**
- D. GPU

Federal Aviation Regulations are the rulebook that governs civilian aviation, and the acronym used for them is FAR. These regulations are codified in Title 14 of the Code of Federal Regulations and are referred to in parts like Part 91 or Part 135—the specific rules pilots and operators must follow. FAR specifically denotes the regulations themselves, not the agency that enforces them. The agency responsible for creating and enforcing these rules is the FAA (Federal Aviation Administration). The other terms don't relate to the regulatory text: GPU is graphics hardware, and FO isn't a standard aviation regulatory acronym.

7. The circumference of a circle is $2\pi r$. If $r = 5$, what is the circumference?

- A. 5π
- B. 10π**
- C. 20π
- D. 2π

Using the circumference formula $C = 2\pi r$. With radius $r = 5$, $C = 2\pi \times 5 = 10\pi$. So the circumference is ten pi. This also fits the alternative form $C = \pi d$ with diameter $d = 2r$, giving $C = \pi(10) = 10\pi$. The other results would come from different radii (for example, 5π would come from a radius of 2.5, 20π from a radius of 10, and 2π from a radius of 1).

8. VSI stands for which term?

- A. Weather
- B. Weight
- C. Visual Service Indicator**
- D. Regular Reserve

VSI stands for Visual Service Indicator. This term refers to a display or signal that shows the service status of a component at a glance, helping you quickly see whether something is OK or needs maintenance. That's different from weather (atmospheric conditions), weight (a mass measure), or regular reserve (a separate concept like reserved fuel or funds). The Visual Service Indicator idea fits the notion of signaling service readiness or need for attention, which is exactly what VSI conveys.

9. What is the 24-hour time for 5:00 PM?

- A. 1600
- B. 1800
- C. 1700**
- D. 1500

Converting 5:00 PM to 24-hour time uses the rule that hours after noon add 12. So 5 plus 12 equals 17, giving 1700 for 5:00 PM. The other options correspond to 4:00 PM (1600), 6:00 PM (1800), and 3:00 PM (1500).

10. The circumference of a circle is $2\pi r$. If $r = 2$, what is the circumference?

- A. 4π**
- B. 2π
- C. 8π
- D. π

The circumference scales with the radius via $C = 2\pi r$. Plugging in $r = 2$ gives $C = 2\pi \times 2 = 4\pi$. So the circumference is 4π (about 12.57 units).

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://mesaentrance.examzify.com>

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

SAMPLE