

AIR FORCE MANUAL (AFMAN) 15-111 PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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	15

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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. Elements such as pressure, temperature, dew point, and wind; automated and augmented observations use a fixed location and time-averaging technique.**
 - A. Subjective Elements
 - B. Objective Elements
 - C. AMOS Observations
 - D. Local Observations
- 2. From true direction to magnetic direction, which steps are applied?**
 - A. Add easterly variation to true direction, and subtract westerly variation from true direction
 - B. Subtract westerly variation from true direction, and add easterly variation to true direction
 - C. Subtract easterly variation from true direction, and add westerly variation to true direction
 - D. Add westerly variation to true direction, and subtract easterly variation from true direction
- 3. Which source is considered most reliable for wind data when wind equipment is inoperative?**
 - A. Active-end wind data
 - B. Forecast wind data
 - C. Inactive runway instrumentation
 - D. Data from other airports
- 4. Operations at the AOL and any reciprocal support from other agencies will be coordinated and formally documented in what?**
 - A. A maintenance log
 - B. A safety briefing
 - C. Base/host unit plans or a local weather support document
 - D. An interagency treaty
- 5. Augmented Observations are used for which elements?**
 - A. Prevailing visibility, present weather, obscurations and all cloud height and ceiling elements
 - B. Temperature variations across the field
 - C. Wind gust patterns only
 - D. Humidity and dew point readings only

- 6. Who collaborates with the local command to establish an AOL and outline what is needed from various agencies on the installation?**
- A. EUs
 - B. Contractors
 - C. Local Weather Office
 - D. Security
- 7. Who will re-evaluate surface prevailing visibility upon initial receipt of a differing control tower value and upon subsequent reportable changes at the control tower level?**
- A. Weather technicians at augmented EUs
 - B. ATC directives
 - C. Observing Aids for Visibility
 - D. METAR technicians
- 8. What is the meaning of the WND DATA ESTMD remark?**
- A. To indicate wind data is verified
 - B. To indicate wind data is from the active end
 - C. To indicate wind data is estimated due to outage
 - D. To indicate wind data is ignored
- 9. In a situation where cloud height data is available from the inactive runway and is representative when the active runway's cloud height equipment is inoperative, what should be used?**
- A. Inactive runway data
 - B. Active runway data
 - C. No data
 - D. Data from another airport
- 10. What is the name of the observing sequence where elements with the greatest rate of change are evaluated last?**
- A. Order of Observing
 - B. Sequence of Measurements
 - C. Observing Protocol
 - D. Data Hierarchy

Answers

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

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Explanations

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1. Elements such as pressure, temperature, dew point, and wind; automated and augmented observations use a fixed location and time-averaging technique.

A. Subjective Elements

B. Objective Elements

C. AMOS Observations

D. Local Observations

These are objective elements. They're values measured directly by instruments (pressure, temperature, dew point, wind) and reported as numeric data. Automated and augmented observations use fixed sensor locations and time-averaging to produce consistent, repeatable measurements, which is a hallmark of objective data. Subjective elements rely on human interpretation, such as describing cloud cover or weather phenomena, rather than instrument readings. AMOS Observations describe the automated system itself, not the category of the elements, and Local Observations refer to data from a local site, not to how the data are classified.

2. From true direction to magnetic direction, which steps are applied?

A. Add easterly variation to true direction, and subtract westerly variation from true direction

B. Subtract westerly variation from true direction, and add easterly variation to true direction

C. Subtract easterly variation from true direction, and add westerly variation to true direction

D. Add westerly variation to true direction, and subtract easterly variation from true direction

Magnetic direction is measured relative to magnetic north, while true direction is measured relative to true north. The difference between true north and magnetic north is variation. If variation is easterly, magnetic north lies to the east of true north, so the magnetic bearing to a given direction is smaller than the true bearing by that amount, meaning you subtract the easterly variation. If variation is westerly, magnetic north lies to the west of true north, so the magnetic bearing is larger than the true bearing by that amount, meaning you add the westerly variation. So, when converting from true to magnetic, you add the westerly variation and subtract the easterly variation. For example, true direction 045° with 12° east variation gives a magnetic direction of 033°; with 12° west variation it becomes 057°.

3. Which source is considered most reliable for wind data when wind equipment is inoperative?

- A. Active-end wind data
- B. Forecast wind data
- C. Inactive runway instrumentation**
- D. Data from other airports

When wind sensors on the runway are inoperative, the best substitute is wind data from the runway's own instrumentation that was recorded for that location. This data is the most reliable because it comes from the same site, with the same exposure to local influences, and has been calibrated and logged for that specific runway. It reflects actual conditions experienced at that location, making it more trustworthy than forecasts or data from distant airports. Active-end wind data isn't available if the equipment is down, so it can't be used. Forecast wind data is not as dependable for immediate operations since it's an estimate of future conditions rather than current winds. Data from other airports may not represent the local wind patterns at your runway, reducing its reliability for touch-down and takeoff decisions.

4. Operations at the AOL and any reciprocal support from other agencies will be coordinated and formally documented in what?

- A. A maintenance log
- B. A safety briefing
- C. Base/host unit plans or a local weather support document**
- D. An interagency treaty

Coordinating operations at the AOL and any reciprocal support from other agencies requires a formal reference that clearly lays out roles, responsibilities, interfaces, and procedures. The proper place for that is base/host unit plans or a local weather support document. These documents are specifically used to document how external support is requested and provided, who does what, when actions occur, and how information is exchanged, ensuring everyone is aligned and prepared. Including a local weather support element helps integrate weather-related considerations into the coordination, which is essential for planning and execution. A maintenance log records equipment upkeep, not interagency coordination. A safety briefing covers immediate safety information, not the formal, long-term coordination details. An interagency treaty is a high-level, formal agreement between governments and isn't used for day-to-day base-level coordination documentation.

5. Augmented Observations are used for which elements?

- A. Prevailing visibility, present weather, obscurations and all cloud height and ceiling elements**
- B. Temperature variations across the field
- C. Wind gust patterns only
- D. Humidity and dew point readings only

Augmented observations are used to supplement automated weather data with human observations for conditions that directly affect flight operations: prevailing visibility, present weather, obscurations, and all cloud height and ceiling elements. Human observers can judge the true visibility across the field, identify and classify weather phenomena, note obscurations like smoke or haze, and determine precise cloud bases and ceilings, which automated systems may not fully capture. This ensures a complete and accurate picture for planning and safety. The other options rely on sensors for measurements such as temperature variations, wind gust patterns, or humidity and dew point, which are not the elements designated for augmentation in this reporting framework.

6. Who collaborates with the local command to establish an AOL and outline what is needed from various agencies on the installation?

A. EUs

B. Contractors

C. Local Weather Office

D. Security

Coordinating an Alternate Operating Location requires a dedicated internal liaison that can pull together the various on-installation agencies and specify what each needs to provide. The units referred to as EUs are the ones that work with the local command to establish the AOL and to outline what is required from every agency on the installation. They serve as the cross-agency coordinators, bringing together security, facilities, communications, weather, logistics, medical, and other essential functions to define responsibilities, resources, and actions needed to stand up the AOL if the primary site is unavailable. While the Local Weather Office, Security, and Contractors each contribute important pieces, they don't drive the complete coordination and requirement-definition across all agencies—that role falls to the EUs.

7. Who will re-evaluate surface prevailing visibility upon initial receipt of a differing control tower value and upon subsequent reportable changes at the control tower level?

A. Weather technicians at augmented EUs

B. ATC directives

C. Observing Aids for Visibility

D. METAR technicians

When the control tower reports a visibility value that differs from what is currently prevailing, the task of confirming and updating the field visibility falls to the weather technicians assigned to augmented weather units. They actively re-evaluate surface prevailing visibility at the moment a new tower value is received and again whenever there are later reportable changes at the tower level. This ensures that the visibility used for METARs and flight operations truly reflects conditions on the airfield, drawing on all available data sources and observations to make the correct adjustment. ATC directives don't perform this recalculation, and the observing aids for visibility are the instruments that gather data rather than re-interpret it. METAR technicians are concerned with producing the METAR reports, but the re-evaluation trigger and authority in this scenario rest with the weather technicians at augmented weather units.

8. What is the meaning of the WND DATA ESTMD remark?

A. To indicate wind data is verified

B. To indicate wind data is from the active end

C. To indicate wind data is estimated due to outage

D. To indicate wind data is ignored

WND DATA ESTMD means the wind information is estimated because the wind sensor or data path is out of service. When a wind sensor is offline or its signal is unusable, the system fills in the wind values using other data sources (such as models or nearby observations) and flags the result as an estimate. This warns you that the wind data aren't directly observed and may be less reliable, so you'd use caution or seek alternate wind information if precise winds are critical. It isn't indicating verified data, nor that the data comes from the active end, nor that the data is ignored.

9. In a situation where cloud height data is available from the inactive runway and is representative when the active runway's cloud height equipment is inoperative, what should be used?

- A. Inactive runway data
- B. Active runway data
- C. No data
- D. Data from another airport

When cloud height data for the active runway isn't available because the equipment is inoperative, use a substitute source that accurately represents the active runway conditions. If the inactive runway's cloud height data is representative of the active area, it provides the necessary ceiling information for safe takeoff and landing decisions rather than leaving you without data. The active runway data can't be used since the instrument isn't functioning, and pulling data from another airport may not reflect local conditions. So, using the representative data from the inactive runway is the correct approach.

10. What is the name of the observing sequence where elements with the greatest rate of change are evaluated last?

- A. Order of Observing
- B. Sequence of Measurements
- C. Observing Protocol
- D. Data Hierarchy

When planning observations across multiple elements, you arrange them by how quickly each one changes, so the slower, more stable ones are evaluated first and the fastest-changing ones come last. This naming captures that approach: the order of observing. It directly describes the method of sequencing measurements based on rate of change, with the greatest rate of change handled last to establish a baseline before tracking dynamic elements. The other terms describe general sequences, protocols, or data organization but don't specify this particular rate-of-change-based ordering, so they don't convey the exact method being tested.

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://afman15111.examzify.com>

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

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