

SURFACE WEATHER OBSERVER PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE**

<https://surfaceweatherobserver.examzify.com>



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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 atmospheric conditions are indicative of a high likelihood of hail during a storm?**
 - A. A stable atmosphere with low humidity
 - B. Strong updrafts and high humidity
 - C. Low pressure systems and cool temperatures
 - D. Calm winds and dry conditions
- 2. Which remark is appended to the report of a METAR or SPECI observation that is not transmitted?**
 - A. FIMI
 - B. FIBI
 - C. FISS
 - D. FNTX
- 3. What would be the correct entry in Column 4 (Speed) of MF1M-10 for wind from 360° at 125 knots?**
 - A. 125
 - B. 360
 - C. 125KT
 - D. 125KTS
- 4. What role does the Coriolis effect play in weather systems?**
 - A. It causes air to remain stagnant
 - B. It leads to the formation of strong tornadoes
 - C. It causes deflection of winds and currents due to Earth's rotation
 - D. It influences temperature alone
- 5. Which of the following would not be entered as a visibility value on MF1M-10?**
 - A. 1/4
 - B. 7/16
 - C. 1/2
 - D. 3/8

- 6. When should a SPECI observation be reported?**
- A. Immediately after a storm
 - B. Only every hour
 - C. When specific criteria change
 - D. Daily at noon
- 7. Which weather condition is described by the abbreviation TSRAGS?**
- A. Thunderstorm, moderate rain, and small hail
 - B. Low drifting dust
 - C. Blowing spray
 - D. Moderate ice pellet showers
- 8. What does TSRAPE stand for in meteorological terms?**
- A. Thunderstorm, light rain, and haze
 - B. Thunderstorm, moderate rain, and ice pellets
 - C. Thunderstorm, moderate rain, and small hail
 - D. Heavy freezing rain
- 9. What effect does mist have on visibility as compared to snow?**
- A. Mist decreases visibility more than snow
 - B. Mist and snow have the same impact on visibility
 - C. Mist typically has less impact than snow
 - D. Mist only causes temporary visibility loss
- 10. What should you do if you decide that the normal procedures in your station's Handbook are inappropriate during observations?**
- A. Follow the guidelines exactly
 - B. Use best possible judgment
 - C. Consult a supervisor
 - D. Wait for daylight

Answers

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

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Explanations

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1. What atmospheric conditions are indicative of a high likelihood of hail during a storm?

- A. A stable atmosphere with low humidity
- B. Strong updrafts and high humidity**
- C. Low pressure systems and cool temperatures
- D. Calm winds and dry conditions

The high likelihood of hail during a storm is primarily associated with strong updrafts and high humidity within the atmosphere. Strong updrafts are critical because they allow water droplets to rise to higher altitudes where temperatures are much colder. As these droplets rise and fall within a storm, they can collide with each other, causing them to freeze and accumulate ice. Multiple cycles of this process can lead to the formation of larger hailstones, particularly when high humidity is present, as it provides ample moisture for the water droplets to grow larger. High humidity plays a significant role, as it enhances the moisture content in the air, which is necessary for the development of severe storms capable of producing hail. The combination of strong updrafts and humidity levels allows these storms to become more intense and sustains the conditions necessary for large hail to form. In contrast, other atmospheric conditions like a stable atmosphere with low humidity, or calm winds and dry conditions, do not provide the necessary environment for hail formation, as they limit the intensity and moisture availability for storm development.

2. Which remark is appended to the report of a METAR or SPECI observation that is not transmitted?

- A. FIMI
- B. FIBI**
- C. FISS
- D. FNTX

In the context of METAR or SPECI observations, remarks that are not transmitted with the report typically fall under specific codes that denote their status. The remark "FIBI" indicates that the observation is an unreported flight information message and is not intended for transmission. This distinction is crucial for aviation weather reporting, as it helps differentiate between information that is relevant and can be disseminated versus information that remains internal or is used for further evaluation without being part of the official report. The other options represent different types of remarks or codes that do not apply to unreported observations, which is why "FIBI" is the correct choice in this context. Each code serves a specific function within the reporting structure, emphasizing the importance of accurate terminology in weather observation documentation.

3. What would be the correct entry in Column 4 (Speed) of MF1M-10 for wind from 360° at 125 knots?

- A. 125**
- B. 360
- C. 125KT
- D. 125KTS

The correct entry for wind speed in Column 4 of the MF1M-10 form requires the speed to be expressed in whole knots without any additional letters or symbols. When reporting the wind speed, the value is presented simply as a number. Therefore, recording "125" accurately communicates the wind speed of 125 knots. Using just the numerical value aligns with standard reporting practices, ensuring clarity and compliance with meteorological conventions that focus on straightforward numerical data input for wind speed. Options that include letters or additional information, such as "KT" or "KTS," would not be appropriate in this context where only the numeric value is needed.

4. What role does the Coriolis effect play in weather systems?

- A. It causes air to remain stagnant
- B. It leads to the formation of strong tornadoes
- C. It causes deflection of winds and currents due to Earth's rotation**
- D. It influences temperature alone

The Coriolis effect primarily describes how the rotation of the Earth influences the movement of air and water masses on the planet. As the Earth spins, different points on its surface move at different velocities—places near the equator move faster than those near the poles. This difference in speed causes moving air (wind) and water currents to be deflected to the right in the northern hemisphere and to the left in the southern hemisphere. This deflection is crucial in understanding the dynamics of weather systems. It leads to the rotation of large-scale systems such as cyclones and anticyclones, contributing to the typical patterns of wind and ocean currents that shape our climate and weather. Without the Coriolis effect, winds would travel in a straight line from high-pressure areas to low-pressure areas, which would significantly alter weather patterns and phenomena. The other choices do not accurately describe the role of the Coriolis effect in weather systems. For instance, stagnant air is typically due to other meteorological conditions rather than the Coriolis effect. Similarly, while the Coriolis effect plays a role in the development of various weather phenomena, it is not a direct cause of strong tornadoes, which are primarily formed by more localized, intense thunderstorms. Temperature influences

5. Which of the following would not be entered as a visibility value on MF1M-10?

- A. 1/4
- B. 7/16**
- C. 1/2
- D. 3/8

When recording visibility values on the MF1M-10, specific standards dictate which values are acceptable. The visibility must be recorded using fractional values that are deemed standardized for reporting purposes. In this case, the value of 7/16 is not typically used in weather observations because it does not align with the common fractions utilized in visibility reporting. Fractions like 1/4, 1/2, and 3/8 can be easily interpreted and are recognized within standard meteorological practices. The fractions used in observations are usually those that contribute to a clear communication of conditions on the field, and 7/16 does not fit this criterion, as it is not commonly used or understood in this context. Thus, only the values that fall within the accepted categories of visibility are recorded, and since 7/16 is not one of them, it would be excluded from the MF1M-10 reporting.

6. When should a SPECI observation be reported?

- A. Immediately after a storm
- B. Only every hour
- C. When specific criteria change**
- D. Daily at noon

A SPECI observation is reported when specific criteria change, such as significant alterations in weather conditions that could impact aviation and safety. This might include shifts in visibility, significant changes in weather phenomena like thunderstorms, or the onset of other conditions that require a timely update to ensure accurate weather reporting. Timeliness is crucial in this context because it helps pilots, air traffic controllers, and other meteorological services make informed decisions based on the most current weather information. Therefore, monitoring specific weather parameters closely and reporting changes allows for a more responsive and safe aviation environment. Other choices describe scenarios that are either not specific to the reporting guidelines or are too infrequent. Reporting immediately after a storm doesn't account for subsequent developments, while limiting reports to every hour fails to capture critical changes that occur more frequently. Daily reports are also insufficient in dynamic weather conditions, making the requirement for reporting based on specific changes the most effective approach.

7. Which weather condition is described by the abbreviation TSRAGS?

- A. Thunderstorm, moderate rain, and small hail**
- B. Low drifting dust
- C. Blowing spray
- D. Moderate ice pellet showers

The abbreviation TSRAGS stands for Thunderstorms, Rain, and Small Hail. This describes a specific weather condition characterized by the occurrence of thunderstorms accompanied by moderate rainfalls and the presence of small hail. Thunderstorms typically involve heavy rain and can also produce hail, which is particularly relevant in this context. Understanding the components of this abbreviation clarifies why option A is the correct answer. Thunderstorms are defined by their convective nature, producing strong winds, considerable precipitation, and sometimes hail. The term "moderate" in the context of rain indicates that while it's not a torrential downpour, it is significant enough to impact visibility and surface conditions, often leading to localized flooding and hazardous travel conditions. The other options describe different weather phenomena that do not relate to thunderstorms or the combination of rain and hail, which is why they do not fit the description provided by the abbreviation TSRAGS.

8. What does TSRAPE stand for in meteorological terms?

- A. Thunderstorm, light rain, and haze
- B. Thunderstorm, moderate rain, and ice pellets**
- C. Thunderstorm, moderate rain, and small hail
- D. Heavy freezing rain

TSRAPE is an acronym that represents specific meteorological conditions characterized by a combination of thunderstorm activity, moderate rainfall, and the presence of ice pellets. This term is used in the field of weather observation to describe particular weather phenomena that can significantly impact regions, especially in terms of safety and travel conditions. The term "thunderstorm" indicates the occurrence of lightning and convective activity, while "moderate rain" suggests a steady but manageable level of precipitation that is heavier than light rain but not classified as heavy rain. The key aspect of TSRAPE is the inclusion of "ice pellets," which are small, round pieces of ice that form when supercooled water droplets freeze upon contact with a cold surface, adding an extra layer of potential hazards. Understanding this term is crucial for surface weather observers as it helps in assessing current weather conditions and issuing appropriate warnings to the public and other stakeholders. This particular combination of weather components in the chosen answer reflects conditions that might require careful monitoring and advisories, especially during winter months or in colder regions where such phenomena can occur.

9. What effect does mist have on visibility as compared to snow?

- A. Mist decreases visibility more than snow
- B. Mist and snow have the same impact on visibility
- C. Mist typically has less impact than snow**
- D. Mist only causes temporary visibility loss

Mist typically has less impact on visibility compared to snow due to the differences in their effects on light scattering and air clarity. Mist consists of tiny water droplets suspended in the air, which can reduce visibility but generally not to the same extent as snow. Snow, on the other hand, can significantly hinder visibility because the flakes are larger and can accumulate on surfaces, reflecting more light and causing greater obstruction. While mist can lead to a hazy appearance, especially over long distances, it often allows for better overall visibility compared to snow, which can create whiteout conditions or reduce visibility dramatically in heavy snowfall. Thus, the assertion that mist typically has less impact on visibility than snow is supported by the physics of light interaction with both moisture types.

10. What should you do if you decide that the normal procedures in your station's Handbook are inappropriate during observations?

A. Follow the guidelines exactly

B. Use best possible judgment

C. Consult a supervisor

D. Wait for daylight

In situations where the normal procedures outlined in your station's Handbook appear to be inappropriate for the observations you are making, it is important to use your best possible judgment to ensure accurate and reliable data collection. This involves assessing the specific circumstances you are facing, understanding the limitations of the standard procedures, and applying critical thinking skills to adapt your observation methods as necessary. The other options present actions that may not effectively address the immediacy of the situation. Following guidelines exactly might lead to inaccurate data if those procedures are not suitable for the current conditions. Consulting a supervisor could be valuable, but it might introduce delays that could compromise the integrity of the observation, especially if immediate decisions are required. Waiting for daylight may not be practical in all circumstances and could hinder timely data collection. Therefore, relying on your own judgment in light of the given conditions ensures that you are making informed decisions to maintain the quality of your observational work.

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://surfaceweatherobserver.examzify.com>

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

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