Avalanche (Avi) Practice Exam (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

1. NOT listed as a predictor of avalanches?

A. Dry spell with no thaw

B. Recent avalanches

C. Rapid thaw

D. Collapsing and cracking

2. Which item is listed as a predictor of avalanches?

A. Force majeure

B. Wind direction

C. Slope angle

D. Collapsing and cracking

3. Which survival probability is listed for burial within 15 minutes?

A. 50%

B. 60%

C. 70%

D. 90%

4. Which thickness describes a very thin layer in the snowpack?

A. Less than 50 cm

B. Greater than 20 cm

C. Equal to 10 cm

D. Less than 10 cm

5. Faceting in snow metamorphism occurs when the temperature gradient is at least 1°C per 10 cm. Which condition is associated with faceting?

A. Less than 1°C per 10 cm

B. No gradient

C. Exactly 2°C per 10 cm

D. At least 1°C per 10 cm

6. Which item is listed as 'current avalanche information' in the planning factors?

A. Weather

B. Current Avalanche Information

C. Consequences

D. Master Human Biases

7. Rounding in snow metamorphism occurs when the temperature gradient is less than 1°C per 10 cm.

A. At least 1°C per 10 cm

B. Less than 1°C per 10 cm

C. No gradient

D. Exactly 2°C per 10 cm

8. Which of the following is a factor to consider when planning to recreate in avalanche terrain?

A. Weather

B. Elevation Gain

C. Slope Angle

D. Distance to Road

9. Wet slab release occurs due to what mechanism?

A. Release of wind slab

B. Release of slab caused by meltwater going between slab and weak layer

C. New snow sliding on existing snow surface

D. Release of dry, unconsolidated snow

10. In the Rutshblock test, what is the specified size of the block to isolate?

A. 2 m wide and 1.5 m upslope

B. 1 m wide by 1 m

C. 3 m wide by 2 m

D. 0.5 m by 1 m

Answers

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

Explanations

1. NOT listed as a predictor of avalanches?

A. Dry spell with no thaw

B. Recent avalanches

C. Rapid thaw

D. Collapsing and cracking

Avalanche risk is driven by instability in the snowpack, which shows up through dynamic conditions and warning signs. Rapid thaw injects water and heat that weaken layers and promote slab releases, making an avalanche more likely. Collapsing and cracking are direct signs that the snowpack is stressed and prone to failure under load. Recent avalanches indicate that the conditions have already produced instability that could continue to trigger new slides. By contrast, a dry spell with no thaw doesn't add energy or weakness to the snowpack—without warming, melting, or loading, there's no new factor driving instability, so it isn't considered a predictor of imminent avalanches.

2. Which item is listed as a predictor of avalanches?

A. Force majeure

B. Wind direction

C. Slope angle

D. Collapsing and cracking

Collapsing and cracking are direct signs that the snowpack has a weak layer underneath a cohesive slab and is failing under stress. When a layer beneath the surface can't support the weight above, small loads or even just the weight of the snow itself can cause the slab to crack and sometimes collapse with an audible thump. Those cracks and the feeling of collapse indicate that instability is present and an avalanche could release, especially if additional loading or external triggers come into play. Other options don't function as immediate predictors in the same way: force majeure is unrelated to snow conditions, wind direction influences slab formation but isn't a current warning sign, and slope angle describes where avalanches are more likely in general but doesn't by itself signal imminent release like actual signs of instability do.

3. Which survival probability is listed for burial within 15 minutes?

A. 50%

B. 60%

C. 70%

D. 90%

In survival analysis, S(t) is the probability a subject has not yet experienced the event by time t. Here the event is burial, so S(15) is the chance someone is still unburied after 15 minutes. Early on, most people haven't yet reached the event, so the survival probability is high, and it tends to decrease as time passes. Among the given options, 90% is the only value that reflects a high likelihood of still being unburied after only 15 minutes. The other values (50%, 60%, 70%) would imply a much larger portion had already been buried by that short interval, which is unlikely. So the survival probability listed for burial within 15 minutes is 0.90, or 90%.

4. Which thickness describes a very thin layer in the snowpack?

A. Less than 50 cm

B. Greater than 20 cm

C. Equal to 10 cm

D. Less than 10 cm

Thickness in the snowpack is about how deep a given layer is. A very thin layer means a small depth, only a few centimeters or less. Among the choices, the description that clearly denotes a very small depth is a thickness under 10 cm. The other options describe layers that are much thicker: less than 50 cm could still be quite substantial; greater than 20 cm is thicker than a shallow layer; and exactly 10 cm is thin, but not in the "very thin" range. So under 10 cm best captures a very thin layer. In practice, such a shallow layer can still create fragile interfaces that influence stability, like a thin crust or a shallow facet layer beneath a surface layer, which matters for avalanche risk.

5. Faceting in snow metamorphism occurs when the temperature gradient is at least 1°C per 10 cm. Which condition is associated with faceting?

A. Less than 1°C per 10 cm

B. No gradient

C. Exactly 2°C per 10 cm

D. At least 1°C per 10 cm

Faceting arises when the snowpack experiences a strong vertical temperature gradient, enough to drive rapid sublimation and re-deposition on crystal faces. The threshold is a gradient of at least 1°C per 10 cm. When that level is reached, vapor moves preferentially between faces, pruning edges and growing flat, smooth surfaces to form faceted crystals. If the gradient is weaker than this threshold, the driving force isn't strong enough to produce pronounced facets; grains tend to grow more uniformly or undergo other forms of metamorphism. With no gradient at all, facet formation doesn't occur, and crystals don't develop the characteristic angular faces. Thus, any gradient that is at least 1°C per 10 cm supports faceting, including a gradient of exactly 2°C per 10 cm.

6. Which item is listed as 'current avalanche information' in the planning factors?

A. Weather

B. Current Avalanche Information

C. Consequences

D. Master Human Biases

In avalanche planning, staying up-to-date with live data on avalanche conditions is essential. This item is specifically listed as current avalanche information, meaning you're looking at the latest danger assessments, recent avalanches, and stability observations to inform your decisions for that day. It's separate from weather, which describes atmospheric conditions, and from consequences, which relates to what could happen if an avalanche occurs, or from master human biases, which covers decision-making pitfalls. Checking current avalanche information guides you to route choices, timing, or whether to head out at all based on the present risk level.

7. Rounding in snow metamorphism occurs when the temperature gradient is less than 1°C per 10 cm.

A. At least 1°C per 10 cm

B. Less than 1°C per 10 cm

C. No gradient

D. Exactly 2°C per 10 cm

Rounding happens when the temperature gradient in the snow is small. The temperature gradient is how quickly temperature changes with depth in the snowpack. With a gentle gradient (less than about 1°C per 10 cm), water vapor diffuses around grains in a relatively uniform way, smoothing edges and turning grains into more rounded shapes. If the gradient is larger (1°C per 10 cm or more), vapor transport becomes directional, promoting growth of flat, faceted faces and depth hoar rather than rounding. So the statement that rounding occurs when the gradient is less than 1°C per 10 cm matches how low gradients drive isotropic growth and rounding. Higher gradients lead to faceting, no gradient means little metamorphism, and a gradient like 2°C per 10 cm would also favor faceting rather than rounding.

8. Which of the following is a factor to consider when planning to recreate in avalanche terrain?

A. Weather

B. Elevation Gain

C. Slope Angle

D. Distance to Road

Weather drives snowpack stability and avalanche risk. When planning to recreate in avalanche terrain, you must consider forecasts and current conditions because snowfall, wind, and temperature changes shape the stability of the snow and the likelihood of slides. Fresh snow adds weight and can overburden weak layers, wind builds wind slabs on leeward slopes, and warming temperatures can weaken bonds within the snowpack. These weather-driven changes affect not only where and when avalanches might occur but also visibility and terrain choices for safer travel. While factors like elevation gain and slope angle matter for effort and route design, weather is the dynamic factor that most directly determines whether a slope is dangerous on a given day.

9. Wet slab release occurs due to what mechanism?

A. Release of wind slab

B. Release of slab caused by meltwater going between slab and weak layer

C. New snow sliding on existing snow surface

D. Release of dry, unconsolidated snow

Wet slab release happens when meltwater penetrates the interface between a cohesive snow slab and a weak layer beneath it. The meltwater lubricates that contact and raises pore water pressure, which weakens the strength of the weak layer while adding weight to the slab. This combination makes it easier for the slab to fail and slide on the damp, weakened layer, often allowing the failure to propagate and trigger a slab avalanche. This commonly occurs during warming periods or after melt events when the snowpack becomes wet. Other scenarios describe different mechanisms: wind slabs form from wind-deposited snow and are typically a dry-slab process; new snow sliding on the surface is a separate condition not driven by meltwater at the slab-weak-layer interface; and dry, unconsolidated snow releases involve a dry avalanche mechanism without the lubricating effects of meltwater.

10. In the Rutshblock test, what is the specified size of the block to isolate?

A. 2 m wide and 1.5 m upslope

B. 1 m wide by 1 m

C. 3 m wide by 2 m

D. 0.5 m by 1 m

The Rutschblock test uses a snow block cut out from the surface to simulate a slab sliding on a weak layer, so the size of that block matters because it has to be large enough to behave like a real slab but small enough to isolate from surrounding snow. The specified block is about 2 meters wide across the slope and about 1.5 meters long upslope along the slope. This dimensions strike a balance: wide enough to reduce edge effects and long enough to capture realistic load distribution and failure behavior, yet small enough to manage and test in the field. If the block is too small, edge effects and boundary constraints can make the test unrepresentative; if it were much larger, isolating it cleanly would be impractical and could alter how the surrounding snow influences the release. Using this standard size allows the test results to be meaningful and comparable across observations.

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://avalanche.examzify.com

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