

Aviation Medicine (AvMed) Practice Test (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

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- 1. What is the relationship between sleep quality and circadian rhythms?**
 - A. They are unrelated**
 - B. Circadian rhythms dictate sleep quality**
 - C. Sleep quality does not affect circadian rhythms**
 - D. Only sleep duration matters**

- 2. What is the published time of useful consciousness at 25,000 feet?**
 - A. 9-12 seconds**
 - B. 3-5 minutes**
 - C. 1-2 minutes**
 - D. Greater than 20 minutes**

- 3. Who is responsible for ensuring that an aircrew member's medical examination is current?**
 - A. The individual aircrew**
 - B. The squadron CO**
 - C. Your Aviation Medical Officer**
 - D. RAAF Institute of Aviation Medicine**

- 4. What causes the Coriolis illusion, an intense sensation of tumbling?**
 - A. Moving your head during a turn**
 - B. Rapid acceleration on take-off at night**
 - C. Rapid deceleration**
 - D. Prolonged turns in cloud**

- 5. If you cannot clear your ears and they hurt on descent, what should be your initial action?**
 - A. Divert immediately to an airfield with medical aid**
 - B. Take a panadol and continue the descent**
 - C. Level off, or ascend if able**
 - D. Descend more rapidly**

- 6. What is the purpose of baroreflexes in the human body?**
- A. Maintain adequate oxygenation**
 - B. Regulate carbon dioxide levels**
 - C. Regulate rate of breathing**
 - D. Maintain adequate blood pressure**
- 7. What is the role of Aviation Medical Examiners in aviation?**
- A. Monitoring air traffic control systems**
 - B. Ensuring flight path safety**
 - C. Evaluating the health of aviation personnel**
 - D. Regulating aircraft design**
- 8. Select the true statement regarding hypoxia.**
- A. Tolerance to hypoxia is highly predictable and never varies day to day.**
 - B. Hypoxia symptoms may be very subtle and difficult to recognise in flight**
 - C. Hypoxia only ever occurs above 10,000 feet**
 - D. Taking corrective action should be delayed until the cause is found**
- 9. What is the recommended action for a pilot experiencing hypoxia?**
- A. Increase altitude to improve oxygen levels**
 - B. Descend to a lower altitude where oxygen levels are sufficient**
 - C. Use supplemental oxygen at the current altitude**
 - D. Alert air traffic control immediately**
- 10. Which activity might exacerbate motion sickness while flying?**
- A. Keeping the mind busy**
 - B. Minimizing head movements**
 - C. Fixing your eyes on the horizon**
 - D. Reading the flight manual**

Answers

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

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Explanations

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1. What is the relationship between sleep quality and circadian rhythms?

- A. They are unrelated
- B. Circadian rhythms dictate sleep quality**
- C. Sleep quality does not affect circadian rhythms
- D. Only sleep duration matters

Circadian rhythms play a crucial role in regulating sleep quality. These rhythms are inherent biological cycles that follow a roughly 24-hour period and are influenced by external environmental cues, such as light and temperature. They help to synchronize various bodily functions, including the sleep-wake cycle. High-quality sleep is typically achieved when an individual's sleep pattern aligns well with their natural circadian rhythms. When circadian rhythms are functioning correctly, they promote the release of hormones like melatonin, which signals the body that it's time to sleep, ultimately enhancing sleep quality. Disruptions to these rhythms, whether due to irregular sleep schedules, exposure to artificial light at night, or shift work, can lead to difficulties in falling asleep, staying asleep, or achieving restorative sleep. By adhering to a schedule that aligns with natural circadian rhythms, individuals tend to experience better sleep quality. Thus, the statement that circadian rhythms dictate sleep quality captures the essential relationship between these two concepts, emphasizing the importance of maintaining alignment with one's natural biological clock for optimal rest and recovery.

2. What is the published time of useful consciousness at 25,000 feet?

- A. 9-12 seconds
- B. 3-5 minutes**
- C. 1-2 minutes
- D. Greater than 20 minutes

At an altitude of 25,000 feet, the time of useful consciousness refers to the duration that a person can maintain effective cognitive function before the lack of oxygen begins to impair their ability to think clearly and respond. The correct range, which is 3-5 minutes, is based on physiological studies regarding the effects of hypoxia—the decreased availability of oxygen at high altitudes. At 25,000 feet, a person is exposed to a significant drop in atmospheric pressure, which leads to a reduction in the partial pressure of oxygen in the air and subsequently in the bloodstream. Depending on individual health factors and level of acclimatization, most individuals can remain conscious and perform basic functions for a brief period, but beyond this timeframe, the onset of hypoxia can result in confusion, disorientation, and loss of consciousness. Understanding these effects is crucial for pilots and aviation personnel, as proper precautions such as supplemental oxygen are necessary when operating at higher altitudes to ensure safety and operational effectiveness. The other ranges provided do not accurately reflect the physiological responses to decreased oxygen availability at 25,000 feet, as timeframes such as 1-2 minutes or less would be representative of much higher altitudes, and greater than 20 minutes would apply to conditions

3. Who is responsible for ensuring that an aircrew member's medical examination is current?

- A. The individual aircrew**
- B. The squadron CO**
- C. Your Aviation Medical Officer**
- D. RAAF Institute of Aviation Medicine**

The responsibility for ensuring that an aircrew member's medical examination is current rests primarily with the individual aircrew member. This is because each aircrew member is required to actively monitor their own medical status and compliance with aviation medical standards. By being aware of their medical examination requirements, including the need for regular check-ups and any necessary documentation, aircrew can ensure they are fit for duty and in adherence with regulatory guidelines. While the squadron commanding officer, Aviation Medical Officer, and institutions like the RAAF Institute of Aviation Medicine play supportive roles in the overall process of aviation medicine, the ultimate duty of maintaining one's own medical examination schedule and status lies with the individual. This emphasizes the importance of personal responsibility in maintaining fitness for flight duties.

4. What causes the Coriolis illusion, an intense sensation of tumbling?

- A. Moving your head during a turn**
- B. Rapid acceleration on take-off at night**
- C. Rapid deceleration**
- D. Prolonged turns in cloud**

The Coriolis illusion occurs when there is an extensive change in rotational head movements that do not match the expected sensations of motion in the body. This sensation of tumbling arises when a pilot or passenger experiences rapid head movement while in a turn, leading to confusion about the body's orientation. In a turn, the fluid in the inner ear helps to detect motion. However, if the head is tilted or turned significantly during a sustained turn, the inner ear can send conflicting signals to the brain, making the person feel as if they are tumbling or spinning. This mismatch between visual input and vestibular (balance) input creates the hallucination of movement, which is a core aspect of the Coriolis illusion. The other options, while related to sensations of movement or disorientation, do not specifically lead to the intense tumbling sensation characteristic of the Coriolis illusion. For example, rapid acceleration during take-off can create a force that may feel unusual, but it does not primarily involve the rotational aspect that triggers the illusion. Similarly, rapid deceleration may cause other disorienting effects, but it does not involve the complex coordination of head and body movement. Lastly, prolonged turns in cloud could lead to other types of spatial disorientation,

5. If you cannot clear your ears and they hurt on descent, what should be your initial action?

- A. Divert immediately to an airfield with medical aid**
- B. Take a panadol and continue the descent**
- C. Level off, or ascend if able**
- D. Descend more rapidly**

When experiencing ear pain during descent due to an inability to equalize ear pressure, the most appropriate initial action is to level off or ascend if possible. This approach helps alleviate the pressure differential that is causing discomfort. Leveling off or ascending allows the pressure in the middle ear to equalize with the cabin pressure more comfortably, as descending further can exacerbate the situation and cause additional pain or injury to the ears. This initial response prioritizes the safety and well-being of the individual by reducing the risk of barotrauma, which can happen if the pressure in the ears cannot equalize due to blockage or other issues. By halting the descent or climbing to a higher altitude where the pressure is lower, you give your body a chance to adjust without causing more pain or potential damage. In contrast, diverting to an airfield or taking medication while continuing the descent may not address the immediate need to equalize ear pressure, and descending more rapidly could worsen the ear pain and risk injury, making these options less suitable.

6. What is the purpose of baroreflexes in the human body?

- A. Maintain adequate oxygenation**
- B. Regulate carbon dioxide levels**
- C. Regulate rate of breathing**
- D. Maintain adequate blood pressure**

Baroreflexes play a crucial role in maintaining adequate blood pressure within the body. They are a negative feedback mechanism that helps to regulate blood pressure by sensing changes in arterial pressure through specialized receptors known as baroreceptors. These receptors are located in key areas such as the carotid sinus and the aortic arch. When blood pressure rises, baroreceptors detect the increased stretch of the arterial walls and send signals to the central nervous system. In response, the body initiates a series of responses that may include vasodilation (widening of blood vessels) and a decrease in heart rate, both of which help lower the blood pressure. Conversely, if blood pressure drops, the baroreflex will trigger compensatory mechanisms to increase heart rate and constrict blood vessels to restore normal levels. This regulatory function is essential for maintaining homeostasis and ensuring that organs and tissues receive an adequate supply of blood. While the other options like oxygenation, carbon dioxide regulation, and the rate of breathing are important aspects of respiratory and circulatory function, they are not the primary focus of baroreflex activity. The baroreflex system is specifically adapted to ensure blood pressure remains within a normal range, which is vital for overall cardiovascular health.

7. What is the role of Aviation Medical Examiners in aviation?

- A. Monitoring air traffic control systems
- B. Ensuring flight path safety
- C. Evaluating the health of aviation personnel**
- D. Regulating aircraft design

The role of Aviation Medical Examiners (AMEs) is primarily focused on evaluating the health of aviation personnel, which is critical for maintaining safety in the aviation environment. AMEs are responsible for conducting medical examinations and assessments to ensure that pilots, air traffic controllers, and other aviation employees meet the necessary health standards. They assess various health aspects, including physical fitness, mental health, vision, and hearing capabilities, to determine if individuals are fit to perform their duties safely. This evaluation is vital, as any medical condition could potentially compromise the safety of flight operations. By ensuring that aviation personnel are healthy and fit for duty, AMEs play a crucial role in accident prevention and the overall safety of the aviation industry.

8. Select the true statement regarding hypoxia.

- A. Tolerance to hypoxia is highly predictable and never varies day to day.
- B. Hypoxia symptoms may be very subtle and difficult to recognise in flight**
- C. Hypoxia only ever occurs above 10,000 feet
- D. Taking corrective action should be delayed until the cause is found

Hypoxia refers to a deficiency in the amount of oxygen reaching the tissues, and its symptoms can indeed be very subtle and difficult to recognize, especially in flight. The environment in an aircraft, with changes in altitude and pressure, can exacerbate this subtlety. Pilots and passengers may experience mild symptoms like slight fatigue, difficulty concentrating, or irritation without realizing they are experiencing hypoxia. This can lead to dangerous situations if not recognized promptly. In aviation, altitude affects the amount of oxygen available; therefore, awareness of these subtle signs is crucial for maintaining safety. It is essential for pilots to be educated on the potential symptoms of hypoxia, so they can recognize them quickly and take appropriate action.

9. What is the recommended action for a pilot experiencing hypoxia?

- A. Increase altitude to improve oxygen levels**
- B. Descend to a lower altitude where oxygen levels are sufficient**
- C. Use supplemental oxygen at the current altitude**
- D. Alert air traffic control immediately**

The recommended action for a pilot experiencing hypoxia is to descend to a lower altitude where oxygen levels are sufficient. At higher altitudes, the partial pressure of oxygen decreases, which can lead to hypoxia, a condition where the body is not getting enough oxygen. By descending to a lower altitude, the pilot can rapidly access a higher partial pressure of oxygen, thereby alleviating the symptoms of hypoxia. Using supplemental oxygen at the current altitude is also an effective response, particularly for those who are trained and equipped to handle it. However, in acute situations where immediate relief is necessary, descending to a safer altitude is often more efficient. While increasing altitude is likely to exacerbate hypoxia, and alerting air traffic control is a prudent measure to ensure safety and receive assistance, the primary and most immediate corrective action is to descend to an altitude where oxygen levels are adequate.

10. Which activity might exacerbate motion sickness while flying?

- A. Keeping the mind busy**
- B. Minimizing head movements**
- C. Fixing your eyes on the horizon**
- D. Reading the flight manual**

The activity that might exacerbate motion sickness while flying is reading the flight manual. When a person reads, especially during turbulence or flight maneuvers, it can lead to a misalignment of sensory inputs. The eyes are focused on a stationary object (the manual) while the body senses movement through the vestibular system. This conflict can intensify feelings of nausea and discomfort associated with motion sickness. In contrast, keeping the mind busy, minimizing head movements, and fixing your eyes on the horizon are generally recommended strategies to help mitigate motion sickness. Keeping the mind engaged can distract from the discomfort. Minimizing head movements reduces the potential for conflicting signals in the inner ear. Looking at the horizon can help the brain reconcile or stabilize visual and vestibular input, aiding in reducing feelings of motion sickness.

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://aviationmed.examzify.com>

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

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