

CAMRT Radiography 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. What is the CT number for bone?**
 - A. 20**
 - B. 0**
 - C. 1000**
 - D. -200**
- 2. A varus deformity is defined as:**
 - A. Knees bent outward - bowlegged**
 - B. Knees bent inward - knee knocked**
 - C. Knees straight - normal alignment**
 - D. Knees locked in extension**
- 3. What is the primary purpose of positioning a patient in the Fowler's position?**
 - A. To aid in digestion**
 - B. To enhance breathing**
 - C. To assist in imaging**
 - D. To promote rest**
- 4. What does the Brachiocephalic artery divide into?**
 - A. Left common carotid artery and subclavian artery**
 - B. Right subclavian artery and common carotid artery**
 - C. Left subclavian artery only**
 - D. Right atrial artery and right common carotid artery**
- 5. To achieve a true lateral view of the elbow in a radiograph, which positioning detail is crucial?**
 - A. Forearm fully pronated**
 - B. Humerus parallel to the image receptor**
 - C. Wrist in a neutral position**
 - D. Elbow flexed at 90 degrees**
- 6. Which view is used to visualize fat pads of the elbow?**
 - A. Anterior**
 - B. Lateral**
 - C. Medial**
 - D. Posterior**

- 7. Which cranial bone is associated with the ear and balance and could affect vertigo?**
- A. Frontal Bone**
 - B. Parietal Bone**
 - C. Occipital Bone**
 - D. Temporal Bone**
- 8. What devices are used to convert high voltage AC currents to DC currents?**
- A. Capacitors**
 - B. Transformers**
 - C. Rectifiers**
 - D. Inductors**
- 9. What effect does increased filtration have on patient dose when other factors are kept constant?**
- A. Increased dose**
 - B. Decreased dose**
 - C. No effect on dose**
 - D. Variable effect depending on equipment**
- 10. Which wrist-positioning maneuver opens the carpal interspaces on the lateral side of the wrist?**
- A. Radial deviation**
 - B. Ulnar deviation**
 - C. Supination**
 - D. Pronation**

Answers

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

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Explanations

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1. What is the CT number for bone?

- A. 20
- B. 0
- C. 1000**
- D. -200

The CT number for bone is defined by its high density, which results in a significantly high value on the Hounsfield scale, which is utilized in computed tomography (CT) imaging. Bone is considerably denser than soft tissue and water, resulting in a CT number around +1000. This density is due to the mineral content in bone, primarily calcium, which absorbs more X-ray radiation compared to less dense substances. In contrast, water is assigned a CT number of 0 on this scale, and fat typically has negative values, while air has significantly low values. Understanding the CT numbers assigned to various substances is crucial in interpreting CT images effectively, as they provide information on the composition and density of the tissues being scanned. This knowledge is vital for radiographers when making assessments based on CT images.

2. A varus deformity is defined as:

- A. Knees bent outward - bowlegged**
- B. Knees bent inward - knee knocked
- C. Knees straight - normal alignment
- D. Knees locked in extension

A varus deformity is characterized by the outward angling of the knees, often referred to as being bowlegged. In this condition, when an individual stands with their feet together, there is a noticeable gap between the knees, indicating that the tibia (shin bone) is angled outward relative to the femur (thigh bone). This condition can occur due to various reasons including developmental factors, anatomy, or conditions such as osteoarthritis. The implications of a varus deformity can also affect gait and overall biomechanics, potentially leading to pain or discomfort in the joints. In contrast, other definitions provided describe different alignment issues. The inward bending of the knees refers to a valgus deformity, commonly associated with knock-knees, where the knees touch or come close together while the feet remain apart. Normal alignment is characterized by the knees being straight and properly aligned beneath the body, whereas locked knees indicate a position where the joints are fully extended and unable to flex. Thus, the correct understanding of the varus deformity encapsulates the unique outward bending characteristic that distinguishes it from these other conditions.

3. What is the primary purpose of positioning a patient in the Fowler's position?

- A. To aid in digestion**
- B. To enhance breathing**
- C. To assist in imaging**
- D. To promote rest**

The primary purpose of positioning a patient in the Fowler's position is to enhance breathing. This semi-upright position, where the patient is seated with the back at an angle (typically between 30 to 90 degrees), helps to increase lung expansion and facilitate better oxygenation. By elevating the upper body, it reduces pressure on the diaphragm and allows for improved ventilation, which is particularly beneficial for patients with respiratory issues, such as asthma or COPD. The elevated posture also aids in the drainage of secretions from the lungs, promoting overall respiratory health. While other positions may support different physiological needs, none offer the same level of benefit for respiratory function as Fowler's position does, making it the optimal choice for enhancing breathing.

4. What does the Brachiocephalic artery divide into?

- A. Left common carotid artery and subclavian artery**
- B. Right subclavian artery and common carotid artery**
- C. Left subclavian artery only**
- D. Right atrial artery and right common carotid artery**

The Brachiocephalic artery, also known as the innominate artery, is a major vessel arising from the aorta that plays a key role in supplying blood to the right side of the head and neck as well as the right upper limb. It divides into two primary branches: the right common carotid artery, which supplies blood to the right side of the head and neck, and the right subclavian artery, which supplies blood to the right arm. This branching is significant in understanding the vascular anatomy of the upper body, as these arteries provide essential blood flow to major regions. The right common carotid artery, after its origin from the Brachiocephalic artery, ascends in the neck to bifurcate into the external and internal carotid arteries. Meanwhile, the right subclavian artery continues to provide circulation to the right arm and shoulder area. The other options listed don't reflect the accurate branching of the Brachiocephalic artery. The left common carotid and left subclavian arteries arise directly from the aortic arch, while the suggestion of a right atrial artery is incorrect as there is no such artery in the context of this branching pattern in the circulatory system. Understanding the precise anatomy

5. To achieve a true lateral view of the elbow in a radiograph, which positioning detail is crucial?

- A. Forearm fully pronated**
- B. Humerus parallel to the image receptor**
- C. Wrist in a neutral position**
- D. Elbow flexed at 90 degrees**

Achieving a true lateral view of the elbow is essential for proper visualization of the joint and surrounding structures. The critical detail in positioning is having the elbow flexed at 90 degrees. This angle places the humerus and forearm in a plane that is perpendicular to the image receptor, ensuring that the structures of the elbow are clearly delineated and that there is minimal superimposition of surrounding anatomy. When the elbow is flexed at 90 degrees, the olecranon process of the ulna is well demonstrated, and it allows for an optimal view of the joint space. This positioning detail aids in visualizing the fat pads, which can be indicative of trauma or other pathologies. Other positioning factors might assist in obtaining a good image, but the 90-degree flexion is paramount for achieving the desired lateral view of the elbow.

6. Which view is used to visualize fat pads of the elbow?

- A. Anterior**
- B. Lateral**
- C. Medial**
- D. Posterior**

The lateral view of the elbow is utilized to visualize fat pads because it allows for a clear perspective of the anterior and posterior fat pads. In this view, the anatomy of the elbow joint can be seen in profile, making it easier to assess the presence of any abnormalities such as changes in the fat pads that might indicate underlying pathology, such as joint effusion or fractures. The anterior and posterior fat pads are normally not visible on a standard radiograph unless there is some form of disruption, such as swelling or fluid accumulation. The lateral view captures the contours of these fat pads and highlights any displacement, which is crucial in diagnosing conditions like a hidden fracture. This view provides critical information by enhancing the visibility of these soft tissue structures adjacent to the elbow joint, which may not be as clearly seen in other views.

7. Which cranial bone is associated with the ear and balance and could affect vertigo?

- A. Frontal Bone**
- B. Parietal Bone**
- C. Occipital Bone**
- D. Temporal Bone**

The temporal bone is indeed the cranial bone that is associated with the ear and balance, which directly relates to conditions such as vertigo. The temporal bone houses critical structures related to hearing and equilibrium, including the inner ear, which contains the cochlea and the vestibular apparatus. The vestibular system is essential for maintaining balance and spatial orientation, and any dysfunction or disturbance in this area can lead to symptoms of vertigo, characterized by a sensation of spinning or loss of balance. The other bones listed do not have this specific association with the auditory and balance structures. While the frontal, parietal, and occipital bones are part of the cranial vault, they do not contain the anatomical structures responsible for these functions, making them unrelated to vertigo symptoms.

8. What devices are used to convert high voltage AC currents to DC currents?

- A. Capacitors**
- B. Transformers**
- C. Rectifiers**
- D. Inductors**

The device responsible for converting high voltage AC currents to DC currents is the rectifier. Rectifiers function by allowing current to flow only in one direction, effectively blocking the opposite flow, which is characteristic of alternating current (AC). This process is crucial in many electronic circuits, where DC is required for proper operation. Rectifiers are typically made using semiconductor materials, such as diodes, which enable this unidirectional current flow. The conversion process involves either half-wave or full-wave rectification, depending on the design, but the primary goal remains the same: to transform the bidirectional flow of AC into a unidirectional flow of DC. In other contexts, while capacitors can help smooth the resulting DC signal post-rectification, transformers step up or step down AC voltages without converting them to DC, and inductors are used to store energy in a magnetic field and do not perform current conversion. Thus, the rectifier is specifically designed for the task of converting AC to DC, making it the correct choice in response to the question.

9. What effect does increased filtration have on patient dose when other factors are kept constant?

A. Increased dose

B. Decreased dose

C. No effect on dose

D. Variable effect depending on equipment

Increased filtration in radiography serves to selectively reduce the lower-energy x-ray photons that contribute to patient dose. When other factors, such as the exposure time, tube current, and voltage, remain constant, filtration primarily acts to improve the quality of the x-ray beam by allowing higher-energy photons to pass through while absorbing the less penetrating, lower-energy photons. Lower-energy photons are less likely to contribute to diagnostic quality images, as they are often absorbed by the patient's tissues rather than reaching the imaging receptor. By filtering out these photons, the overall dose the patient receives is diminished, leading to a decrease in the amount of radiation exposure. Additionally, while higher filtration can reduce patient dose, it may necessitate an increase in exposure factors to maintain image quality, potentially offsetting some dose reduction. However, this interplay generally results in a net reduction of patient dose. Understanding how filtration improves beam quality while minimizing unnecessary radiation exposure is critical in radiographic practice, aligning with the principles of radiation protection and patient safety.

10. Which wrist-positioning maneuver opens the carpal interspaces on the lateral side of the wrist?

A. Radial deviation

B. Ulnar deviation

C. Supination

D. Pronation

The maneuver that effectively opens the carpal interspaces on the lateral side of the wrist is ulnar deviation. When the wrist is positioned in ulnar deviation, the carpal bones on the lateral side are separated, which enhances visibility of the individual carpal structures and their relationships within that region. This is particularly useful during radiological evaluations to assess for fractures or other abnormalities in the carpal bones. In contrast, radial deviation would compress these structures together rather than separate them. Supination and pronation refer to the rotation of the forearm and do not significantly influence the carpal interspaces in the same way as ulnar deviation does. Therefore, the movement of ulnar deviation is critical for providing a clearer view of the carpal anatomy on the lateral side of the wrist.

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://camrtradiography.examzify.com>

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