

# 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

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- 1. Which projection best demonstrates ascites in a patient who cannot stand or sit erect?**
  - A. Left lateral decubitus**
  - B. Dorsal decubitus**
  - C. AP supine**
  - D. AP supine chest**
  
- 2. In a shoulder arthrogram, where should the needle be inserted?**
  - A. 1 inch above the acromion process**
  - B. 1/2 inch superior and medial to the coracoid process**
  - C. 1/2 inch inferior and lateral to the coracoid process**
  - D. At the midline of the shoulder joint**
  
- 3. Which position is characterized by the patient's head being elevated above the feet?**
  - A. Supine**
  - B. Prone**
  - C. Fowler's**
  - D. Trendelenburg**
  
- 4. In what position are the zygapophyseal joints best demonstrated on a thoracic spine?**
  - A. Lateral view**
  - B. Oblique view**
  - C. AP view**
  - D. Supine view**
  
- 5. In which scenario is expiration used for a chest x-ray?**
  - A. To detect vertebral fractures**
  - B. To show pleural effusion**
  - C. To assess diaphragm excursion**
  - D. To evaluate cardiac shadow**

- 6. In medical ethics, the principle of beneficence refers to?**
- A. Avoiding harm to patients**
  - B. Providing benefits and promoting well-being**
  - C. Ensuring justice and fairness**
  - D. Respecting patient autonomy**
- 7. What is the NCRP recommended occupational dose limit for skin, hands, and feet?**
- A. 100 mSv**
  - B. 500 mSv**
  - C. 250 mSv**
  - D. 50 mSv**
- 8. What is the term for gas in the peritoneal cavity?**
- A. Pneumothorax**
  - B. Pneumoperitoneum**
  - C. Pneumomediastinum**
  - D. Pneumonitis**
- 9. What is the advantage of slip ring technology in CT?**
- A. Improves image quality by reducing motion artifacts**
  - B. Eliminates the need for contrast media**
  - C. Allows for continuous rotation of the x-ray tube**
  - D. Reduces radiation dose to the patient**
- 10. What structure is prominently displayed in profile laterally with external rotation of the humerus?**
- A. Less tubercle**
  - B. Greater tubercle**
  - C. Coracoid process**
  - D. Surgical neck**

## Answers

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

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## **Explanations**

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**1. Which projection best demonstrates ascites in a patient who cannot stand or sit erect?**

**A. Left lateral decubitus**

**B. Dorsal decubitus**

**C. AP supine**

**D. AP supine chest**

The left lateral decubitus projection is the best choice for demonstrating ascites in a patient who is unable to stand or sit erect. This positioning allows for the detection of free fluid within the abdominal cavity, as the fluid will naturally gravitate to the most dependent area when the patient is lying on their side. When the patient is positioned in the left lateral decubitus, any free fluid will typically collect in the right side of the abdomen, which can then be visualized on the radiograph. This technique is particularly important in the imaging of ascites because the presence of free fluid is best identified when the beam is perpendicular to the fluid level, thereby enhancing the visibility of the fluid's outline on the image. The left lateral position also aids in the differentiation between ascitic fluid and other structures within the abdomen. Other options like dorsal decubitus or AP supine do not provide the same quality of visualization for free fluid. An AP supine view may not clearly show the fluid levels due to the absence of the horizontal beam that would be produced in a decubitus position. Additionally, an AP supine chest would primarily focus on the thoracic area, further making it unsuitable for assessing abdominal conditions such as ascites. Thus, the left

**2. In a shoulder arthrogram, where should the needle be inserted?**

**A. 1 inch above the acromion process**

**B. 1/2 inch superior and medial to the coracoid process**

**C. 1/2 inch inferior and lateral to the coracoid process**

**D. At the midline of the shoulder joint**

In a shoulder arthrogram, the most appropriate location for needle insertion is specifically chosen to access the glenohumeral joint effectively. The correct placement, which is 1/2 inch inferior and lateral to the coracoid process, allows the practitioner to avoid surrounding structures while providing the best access to the joint cavity. This area is typically devoid of major neurovascular bundles, reducing the risk of complications during the procedure. The coracoid process serves as a prominent anatomical landmark, and positioning the needle slightly inferior and lateral is critical for ensuring that the contrast material can be injected directly into the shoulder joint, facilitating optimal imaging results. This precise localization aids in the visualization of potential tears, joint alignment, and any abnormalities that may be present within the glenohumeral joint. Other locations such as above the acromion process or at the midline may not effectively enter the joint space and could risk injuring surrounding tissues or missing the target area entirely. Additionally, superior and medial to the coracoid may not provide the advantageous direct entry required for thorough assessment. Therefore, the chosen insertion site helps achieve the goal of the arthrogram efficiently and safely.

**3. Which position is characterized by the patient's head being elevated above the feet?**

**A. Supine**

**B. Prone**

**C. Fowler's**

**D. Trendelenburg**

The position characterized by the patient's head being elevated above the feet is known as Fowler's position. In this position, the patient typically sits at an angle of 45 to 60 degrees, with the back supported by pillows or a wedge. It is commonly used in medical settings for a variety of reasons, including improving respiratory function, enhancing comfort during eating or social interactions, and facilitating certain examinations or procedures. Fowler's position is particularly beneficial for patients with respiratory distress, as it allows gravity to assist in the expansion of the lungs. This elevation can also provide better access for medical professionals during assessments and interventions. In contrast, the other positions listed do not involve head elevation above the feet. Supine refers to lying flat on the back, prone is lying flat on the stomach, and Trendelenburg involves the patient being laid back with their legs elevated above the head, which is the opposite of what is described in the question.

**4. In what position are the zygapophyseal joints best demonstrated on a thoracic spine?**

**A. Lateral view**

**B. Oblique view**

**C. AP view**

**D. Supine view**

The zygapophyseal joints are best visualized in an oblique view of the thoracic spine due to the orientation and alignment of these joints. The zygapophyseal joints are the synovial joints located between the articular processes of adjacent vertebrae and are primarily positioned at an angle that is not well demonstrated in other standard views. In an oblique position, the rotation of the patient's body opens up the joint spaces, allowing for better visualization of the zygapophyseal joints on the respective side that is facing up. This view minimizes the overlap of the vertebral bodies and maximizes the exposure of the joint spaces, which is critical for accurate assessment in radiographic studies. Other views, such as lateral, AP, or supine, do not provide the same advantageous angle for visualizing these joints effectively. In the lateral view, the zygapophyseal joints are not opened sufficiently due to alignment relative to the plane of the film. The AP view tends to foreshorten and overlap the joint spaces, making the details less discernible. Similarly, being in a supine position, while beneficial for certain examinations, does not enhance the visibility of the zygapophyseal joints in the thoracic region.

**5. In which scenario is expiration used for a chest x-ray?**

- A. To detect vertebral fractures
- B. To show pleural effusion
- C. To assess diaphragm excursion**
- D. To evaluate cardiac shadow

Expiration is used for a chest x-ray primarily to assess diaphragm excursion. When a patient exhales, the diaphragm moves upward, reducing the volume of the thoracic cavity and allowing for a clearer view of its position and movement. This technique is crucial for evaluating the mobility of the diaphragm, which can indicate the presence of conditions such as diaphragmatic paralysis or other respiratory issues. In the context of other scenarios, detecting vertebral fractures, showing pleural effusion, and evaluating cardiac shadow typically rely on different techniques or patient positioning, where the focus is on other anatomical structures rather than diaphragm movement. For instance, pleural effusion is often better visualized on an upright inspiratory view, which can demonstrate fluid levels more clearly. Therefore, using expiration specifically supports the evaluation of diaphragm function and excursion.

**6. In medical ethics, the principle of beneficence refers to?**

- A. Avoiding harm to patients
- B. Providing benefits and promoting well-being**
- C. Ensuring justice and fairness
- D. Respecting patient autonomy

The principle of beneficence is fundamental in medical ethics and is primarily concerned with the actions taken by healthcare professionals to promote the well-being of patients. It involves not just offering medical treatment but also ensuring that these interventions provide benefits, enhance the quality of life, and prioritize the health and welfare of those receiving care. This principle goes beyond simply avoiding harm; it actively requires that healthcare providers work to maximize benefits. Thus, beneficence encompasses actions aimed at helping patients, ensuring they receive necessary care and interventions that will improve their health outcomes. In contrast, avoiding harm is related to the principle of non-maleficence, while justice pertains to fairness in the distribution of resources and care. Respecting patient autonomy is about honoring the patients' rights to make informed decisions regarding their own treatment. Beneficence integrates these concepts but is distinct in its focus on promoting good and welfare in a proactive manner.

**7. What is the NCRP recommended occupational dose limit for skin, hands, and feet?**

- A. 100 mSv
- B. 500 mSv**
- C. 250 mSv
- D. 50 mSv

The NCRP, or National Council on Radiation Protection and Measurements, recommends an occupational dose limit of 500 mSv for skin, hands, and feet. This limit is established to protect workers who may be exposed to radiation in various medical, industrial, or research settings. The higher limit reflects the fact that these areas of the body can typically withstand greater exposure compared to more sensitive organs. In practice, this means that radiography professionals can safely perform their duties while still adhering to radiation safety protocols, provided that they manage their exposure levels carefully. It is important for professionals in the field to be aware of these limits as they guide safe work practices and help prevent radiation-related health issues over prolonged periods of occupational exposure.

**8. What is the term for gas in the peritoneal cavity?**

- A. Pneumothorax
- B. Pneumoperitoneum**
- C. Pneumomediastinum
- D. Pneumonitis

The term for gas found in the peritoneal cavity is pneumoperitoneum. This condition often arises due to a perforation of a hollow organ, such as the stomach or intestines, which allows air to escape into the abdominal cavity. The presence of gas in this area can be visualized through abdominal imaging techniques, and its identification is critical for determining the need for surgical intervention, especially in emergency settings. Pneumothorax refers to air in the pleural space surrounding the lungs, which is a different anatomical location and involves respiratory complications. Pneumomediastinum involves the presence of air in the mediastinum, the central compartment of the thoracic cavity, and is unrelated to the abdominal cavity. Pneumonitis describes inflammation of the lung tissue, often due to infection or irritants, not the presence of gas in any cavity. Understanding these distinctions is crucial for accurately diagnosing and managing conditions related to gas in various body cavities.

**9. What is the advantage of slip ring technology in CT?**

- A. Improves image quality by reducing motion artifacts**
- B. Eliminates the need for contrast media**
- C. Allows for continuous rotation of the x-ray tube**
- D. Reduces radiation dose to the patient**

The advantage of slip ring technology in computed tomography (CT) is that it allows for continuous rotation of the x-ray tube. This continuous motion enables faster data acquisition and improved scanning efficiency, which is crucial for producing high-quality images in a shorter amount of time. As the x-ray tube rotates smoothly around the patient without the need to stop and reposition, it enhances the ability to acquire data for helical or spiral CT scans. This technique leads to better accuracy in imaging, reduces beam overlap, and improves the overall quality of the images obtained. Additionally, it allows for advanced imaging techniques, like multi-detector CT, that contribute to the detailed visualization of structures within the body. Meanwhile, the other options, while they describe certain benefits that can be associated with various imaging technologies, do not accurately represent the primary advantage offered specifically by slip ring technology.

**10. What structure is prominently displayed in profile laterally with external rotation of the humerus?**

- A. Less tubercle**
- B. Greater tubercle**
- C. Coracoid process**
- D. Surgical neck**

The structure that is prominently displayed in profile laterally with external rotation of the humerus is the greater tubercle. When the arm is externally rotated, the positioning allows the greater tubercle to be fully visible on the lateral side of the humerus. This anatomical landmark serves as an important attachment site for the rotator cuff muscles, particularly the supraspinatus, infraspinatus, and teres minor. In contrast, while the lesser tubercle, coracoid process, and surgical neck are also parts of the shoulder anatomy, they do not come into view in the same manner with external rotation. The lesser tubercle is more medial and typically not as prominent on a lateral view. The coracoid process, arising from the scapula, is situated more anteriorly and would not typically be highlighted in a lateral view. The surgical neck of the humerus is also not easily distinguished in profile during this specific rotation, as it is located more inferiorly. The prominence of the greater tubercle in this position is critical for assessing the shoulder joint and its associated structures during imaging.

## 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](mailto: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!**

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