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. Which adjustment in kVp is necessary for a fiberglass cast?

A. Increase by 1 - 2 kVp

B. Increase by 3 - 4 kVp

C. Decrease by 3 - 5 kVp

D. No adjustment required

2. Why is it important to disinfect imaging equipment?

A. To improve image quality

B. To prevent cross-contamination between patients

C. To decrease equipment wear and tear

D. To enhance operational efficiency

3. Which rib is known to attach to the sternal angle?

A. First rib

B. Second rib

C. Third rib

D. Fourth rib

4. Which rib is attached at the sternal angle?

A. 2nd rib

B. 1st rib

C. 3rd rib

D. 4th rib

5. Which pathology is best visualized by a double contrast barium enema?

A. GI bleed

B. Polyps

C. Hemorrhoids

D. Bowel obstruction

6. What is the grid conversion formula?

A. mAs1 = GCF1 * mAs2

B. mAs1 / mAs2 = GCF2 / GCF1

C. mAs1 / mAs2 = GCF1 / GCF2

D. mAs2 = GCF1 * mAs1

7. Which statement is true regarding stroke protocol in an ER department?

A. A CT scan of the head must be done as soon as possible

B. A unenhanced CT scan will provide sufficient information to diagnose and treat a stroke

C. A MRI is required to rule out a stroke

D. A CT scan of the head is only done if a patient has a previous history of a stroke

8. What is the indication of a positive fat pad sign?

A. Visible foreign body in the joint

B. Occult fracture not directly visible

C. Joint effusion without fracture

D. Normal range of motion

9. If a PA chest radiograph shows the left clavicle closer to the center of the spine compared to the right, what action should the MRT take?

A. Turn the left side closer to the image receptor (IR)

B. Turn the right side closer to the image receptor (IR)

C. Accept the image due to the patient's kyphosis

D. Roll the shoulders and ensure the central ray is on the center of the spine

10. Which organization developed the Code of Ethics for the protection of the public in medical radiation technology?

A. The American Medical Association

B. The College of Medical Radiation Technologists

C. The Radiological Society of North America

D. The World Health Organization

Answers

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

Explanations

1. Which adjustment in kVp is necessary for a fiberglass cast?

A. Increase by 1 - 2 kVp

B. Increase by 3 - 4 kVp

C. Decrease by 3 - 5 kVp

D. No adjustment required

When dealing with fiberglass casts in radiography, it is essential to adjust the kilovolt peak (kVp) appropriately to ensure optimal image quality. Fiberglass casts have a different composition and density compared to the body tissues, which affects how X-rays penetrate through them. Increasing the kVp by 3 to 4 is recommended because fiberglass is relatively dense and can attenuate X-rays more than soft tissues. By raising the kVp, the X-rays have greater energy, which allows them to penetrate the cast more effectively while still providing adequate contrast for the underlying anatomy. This adjustment helps to prevent underexposure of the image, ensuring that the details of the bony structures beneath the cast are clearly visualized. In contrast, maintaining the kVp without any adjustments could lead to insufficient penetration and ultimately result in an unclear image. Similarly, decreasing the kVp would decrease the penetrating ability of the X-rays, which is not suitable for the density presented by a fiberglass cast. Therefore, the increase of 3 to 4 kVp is the most suitable approach in this scenario to provide clear and diagnostic-quality images.

2. Why is it important to disinfect imaging equipment?

A. To improve image quality

B. To prevent cross-contamination between patients

C. To decrease equipment wear and tear

D. To enhance operational efficiency

Disinfecting imaging equipment is crucial to prevent cross-contamination between patients. This is especially important in healthcare settings where multiple patients come into contact with the same equipment. Pathogens can survive on surfaces for varying lengths of time, and when proper disinfection protocols are not followed, there is a significant risk of transmitting infections from one patient to another. The use of disinfectants helps eliminate or reduce harmful microorganisms, ensuring a safer environment for both patients and healthcare providers. Proper disinfection is an essential aspect of infection control practices in radiography and contributes to overall patient safety and quality of care.

3. Which rib is known to attach to the sternal angle?

A. First rib

B. Second rib

C. Third rib

D. Fourth rib

The second rib is known to attach to the sternal angle, which is also referred to as the angle of Louis. This anatomical landmark is significant because it marks the junction where the manubrium meets the body of the sternum. The second rib articulates directly with the sternum at this point, making it a key feature in describing the location of other structures in the thoracic region. Understanding the importance of the sternal angle is crucial for identifying other anatomical relationships, such as the location of the aortic arch and important thoracic landmarks. The sternal angle is also used to count ribs and locate intercostal spaces during clinical examinations, which further emphasizes the significance of the second rib's attachment.

4. Which rib is attached at the sternal angle?

A. 2nd rib

B. 1st rib

C. 3rd rib

D. 4th rib

The 2nd rib is attached at the sternal angle, which is also known as the angle of Louis. This anatomical landmark is found at the junction between the manubrium and the body of the sternum, and it is significant because it serves as a reference point for locating other structures in the thorax. The 2nd rib articulates with the sternum at this angle, providing an important connection in the ribcage structure. Understanding the attachment of the 2nd rib at the sternal angle also relates to clinical practices, as it can be a guide for locating the aortic arch, bifurcation of the trachea, and the corresponding vertebral level of the thoracic spine. This knowledge is essential for radiographers when positioning patients and interpreting thoracic images accurately. The 1st rib does not have a direct attachment at the sternal angle; instead, it articulates with the manubrium of the sternum. The 3rd and 4th ribs attach to other locations on the sternum, further illustrating why the 2nd rib is uniquely associated with the sternal angle.

5. Which pathology is best visualized by a double contrast barium enema?

A. GI bleed

B. Polyps

C. Hemorrhoids

D. Bowel obstruction

A double contrast barium enema is particularly effective for visualizing polyps within the colorectal region. This technique utilizes both barium sulfate

6. What is the grid conversion formula?

A. mAs1 = GCF1 * mAs2

B. mAs1 / mAs2 = GCF2 / GCF1

C. mAs1 / mAs2 = GCF1 / GCF2

D. mAs2 = GCF1 * mAs1

The grid conversion formula is essential in radiography as it helps radiologic technologists adjust exposure factors when using a grid. The formula relates the milliampere-seconds (mAs) before and after the introduction of a grid, taking into account the grid conversion factors (GCF) for the different grid setups. The correct relationship is that the ratio of mAs values is equal to the ratio of the grid conversion factors. Therefore, stating that the ratio of mAs1 to mAs2 equals the ratio of GCF1 to GCF2 accurately reflects the underlying physics of radiation exposure and grid use. This formula is crucial when transitioning from one grid setup to another, ensuring that the radiographic image maintains proper density despite the change in grid characteristics. Understanding this formula allows radiologic technologists to effectively calculate the required adjustments needed in exposure settings, which ensures optimal image quality and minimizes patient radiation exposure.

7. Which statement is true regarding stroke protocol in an ER department?

A. A CT scan of the head must be done as soon as possible

B. A unenhanced CT scan will provide sufficient information to diagnose and treat a stroke

C. A MRI is required to rule out a stroke

D. A CT scan of the head is only done if a patient has a previous history of a stroke

The assertion that a CT scan of the head must be done as soon as possible is correct because timely imaging is crucial in the evaluation and management of a stroke. In emergency situations, particularly with potential stroke patients, rapid assessment can significantly impact treatment decisions, such as whether to administer thrombolysis. A CT scan is typically the first imaging modality used because it is widely available, quick to perform, and highly effective in identifying hemorrhagic strokes, which is essential for determining the appropriate course of action. In the case of strokes, utilizing a CT scan promptly helps differentiate between ischemic and hemorrhagic strokes, allowing healthcare providers to initiate treatment as soon as possible—which is vital given the time-sensitive nature of stroke interventions. While unenhanced CT provides important early information, it is not sufficient for comprehensive management alone, as it may not detect certain types of ischemic strokes immediately or differentiate other conditions. MRI is not routinely required to rule out a stroke in the acute setting due to longer acquisition times and lower availability compared to CT scans. Hence, prompt CT imaging remains the standard protocol in emergency departments for suspected stroke cases.

8. What is the indication of a positive fat pad sign?

A. Visible foreign body in the joint

B. Occult fracture not directly visible

C. Joint effusion without fracture

D. Normal range of motion

A positive fat pad sign is typically indicative of an occult fracture that may not be directly visible on the radiograph. This sign occurs when there is an increase in joint effusion or hematoma, which displaces the fat pads around the joint. In patients, particularly with elbow injuries, the anterior and posterior fat pads may become elevated and visible on imaging, indicating underlying trauma such as a fracture—often of the radial head in the case of elbow injuries—despite the fracture itself not being clearly seen on the X-ray. While the presence of a visible foreign body in the joint could suggest injury, it does not correlate with the fat pad sign. Similarly, joint effusion could occur without an underlying fracture, and a normal range of motion would not signify any injury or trauma consistent with the presence of a fat pad sign. Thus, the positive fat pad sign is primarily associated with occult fractures, making it a crucial radiographic finding for assessment in clinical practice.

9. If a PA chest radiograph shows the left clavicle closer to the center of the spine compared to the right, what action should the MRT take?

A. Turn the left side closer to the image receptor (IR)

B. Turn the right side closer to the image receptor (IR)

C. Accept the image due to the patient's kyphosis

D. Roll the shoulders and ensure the central ray is on the center of the spine

In the scenario where a PA chest radiograph reveals that the left clavicle is positioned closer to the center of the spine than the right, this indicates that there may be a rotation of the thoracic spine or torso during the imaging process. To achieve a more accurate depiction of the chest, particularly in terms of symmetrical positioning of the clavicles, the appropriate action is to turn the right side closer to the image receptor. By adjusting the right side nearer to the IR, the MRT can help correctly align the patient's shoulders and thoracic cavity, effectively reducing the rotational distortion seen in the radiograph. This corrective maneuver moves the anatomy into a more neutral position, helping to ensure that the clavicles are aligned symmetrically in relation to the spine. This is crucial for accurate interpretation of a chest radiograph, providing clear diagnostic information and avoiding misdiagnosis based on improper positioning. While factors like patient kyphosis can influence image appearance, it shouldn't be the only reason for accepting an image without adjustments. Moreover, rolling the shoulders or aiming the central ray at the center of the spine, although helpful in certain contexts, does not address the underlying issue of torso rotation captured in the initial image. Hence, repositioning by turning the right side closer to the

10. Which organization developed the Code of Ethics for the protection of the public in medical radiation technology?

A. The American Medical Association

B. The College of Medical Radiation Technologists

C. The Radiological Society of North America

D. The World Health Organization

The College of Medical Radiation Technologists is the organization that developed the Code of Ethics specifically for the protection of the public in medical radiation technology. The code is designed to guide practitioners in maintaining professional standards and ethical behavior, ensuring that patient safety and well-being are prioritized in the practice of medical radiation technology. This organization focuses on establishing and upholding the educational, professional, and ethical standards required for medical radiation technologists. The Code of Ethics serves as a foundational document that informs practitioners about their responsibilities, encourages accountability, and promotes the highest standards of care for patients. By having this code in place, the College seeks to enhance the professionalism and integrity of individuals working within the field, fostering public trust. In contrast, other organizations mentioned, while relevant in healthcare, do not have a primary focus on medical radiation technology or the specific development of such ethical guidelines. The American Medical Association and the Radiological Society of North America concentrate more on broader medical practices and specialties, while the World Health Organization addresses global health but does not specifically establish codes for medical radiation technology practitioners.

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!