

# XRAY POSITIONING PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 angle of tube tilt is required for lumbar obliques at a distance of 40 inches?**
  - A. 15 degrees
  - B. No tube tilt
  - C. 20 degrees
  - D. 10 degrees
  
- 2. Which area should be included during collimation for a Lateral Foot X-ray?**
  - A. Only the calcaneus
  - B. Distal tib-fib, calcaneus, tips of toes
  - C. Only the toes
  - D. Midfoot and forefoot only
  
- 3. What is the recommended cassette size for an AP/PA coccyx projection?**
  - A. 10" x 12"
  - B. 8" x 10"
  - C. 5" x 7"
  - D. 14" x 17"
  
- 4. What is the recommended cassette size for a lateral oblique elbow radiograph?**
  - A. 10" x 12" vertical orientation
  - B. 8" x 10" horizontal orientation
  - C. Half of a 10" x 12" horizontal orientation
  - D. 12" x 14" vertical orientation
  
- 5. Where is the central ray directed for an AP Thoracic X-ray?**
  - A. At the level of the xiphoid process
  - B. 1.5" below T1
  - C. 1.5" above T1
  - D. At the mid-point of the film

6. For proper patient positioning in APOM, how should the incisors be aligned?
- A. Above the base of occiput
  - B. In line with the base of occiput
  - C. Below the mastoid process
  - D. In a straight line with the sternum
7. What FFD is recommended for a lateral coccyx projection?
- A. 38"
  - B. 36"
  - C. 40"
  - D. 42"
8. What is the maximum collimation size for the AP/PA sacrum projection?
- A. 8" x 10"
  - B. 9" x 11"
  - C. 10" x 12"
  - D. 11" x 14"
9. What is a key consideration when placing the foot on the cassette for an AP foot X-ray?
- A. The foot must be angled at 30°
  - B. The sole of the foot must be on the cassette
  - C. The toes must be extended past the edge
  - D. The heel must be dropped back
10. What is the proper hand positioning for internal rotation of the shoulder?
- A. Hand is supinated
  - B. Hand is externally rotated
  - C. Hand is internally rotated with dorsal aspect along the body
  - D. Hand is placed on the hip

## **Answers**

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

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## **Explanations**

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**1. What angle of tube tilt is required for lumbar obliques at a distance of 40 inches?**

- A. 15 degrees
- B. No tube tilt**
- C. 20 degrees
- D. 10 degrees

*For lumbar oblique projections, a critical factor is the anatomy being visualized and the alignment necessary to properly demonstrate the lumbar spine's intervertebral foramina. When performing these projections, it is essential to establish whether tube tilt is necessary to achieve optimal visualisation of the structures in question. In the case of a lumbar oblique projection, a standard practice at a distance of 40 inches (also referred to as the source-to-image distance) is to position the x-ray tube perpendicular to the film or image receptor without any angle of tube tilt. This positioning allows for adequate visualization of the lumbar spine and helps ensure that the anatomy is properly projected without distortion. The anatomy of the lumbar region is quite stable, and the placement of the patient and the receptor generally suffices to obtain a clear image of the lumbar vertebrae and surrounding structures without additional angles. This approach minimizes the risk of image distortion and maintains a clear representation of the intervertebral foramina and the posterior elements of the vertebrae, enhancing diagnostic accuracy.*

**2. Which area should be included during collimation for a Lateral Foot X-ray?**

- A. Only the calcaneus
- B. Distal tib-fib, calcaneus, tips of toes**
- C. Only the toes
- D. Midfoot and forefoot only

*Collimation is a critical aspect of radiographic technique as it helps to ensure that only the area of interest is exposed to the X-ray beam, thus minimizing patient exposure to radiation and enhancing image quality. For a lateral foot X-ray, it's important to cover various anatomical structures that fall within the lateral view of the foot. Including the distal tibia-fibula, calcaneus, and tips of the toes in the collimation field is essential because this ensures that you capture both the bones of the lower leg and all the critical components of the foot in a single image. This comprehensive coverage allows for the assessment of the alignment and integrity of the foot and its relationships to the distal leg structures. Focusing solely on the calcaneus or other narrow areas would not provide sufficient visual information about the entire foot, which is necessary for diagnosing any potential fractures, dislocations, or other pathologies. Therefore, the inclusion of the distal tibia-fibula, calcaneus, and tips of the toes not only follows the correct protocols for effective imaging but also promotes thorough evaluation during clinical assessments.*

### 3. What is the recommended cassette size for an AP/PA coccyx projection?

- A. 10" x 12"
- B. 8" x 10"**
- C. 5" x 7"
- D. 14" x 17"

*The recommended cassette size for an anteroposterior (AP) or posteroanterior (PA) coccyx projection is 8" x 10". This size is ideal for focusing on the coccyx while minimizing unnecessary exposure of surrounding tissues. The smaller cassette provides a more concentrated field of view, which is particularly important for films that require careful positioning and detail in small body areas such as the coccyx. Using a size like 8" x 10" allows for adequate image receptor coverage while maintaining optimal detail and sharpness in the region of interest. Additionally, this size is well-suited for patient comfort and efficient use of film or digital imaging resources. Larger sizes such as 10" x 12" or 14" x 17" could lead to unnecessary radiation exposure and may result in less focused images of the coccyx, making them less ideal for this particular projection. The 5" x 7" size may be too small to capture sufficient detail and anatomy for accurate diagnostic interpretation in this context.*

### 4. What is the recommended cassette size for a lateral oblique elbow radiograph?

- A. 10" x 12" vertical orientation
- B. 8" x 10" horizontal orientation
- C. Half of a 10" x 12" horizontal orientation**
- D. 12" x 14" vertical orientation

*The recommended cassette size for a lateral oblique elbow radiograph is indeed half of a 10" x 12" horizontal orientation. This size is optimal because it allows for adequate coverage of the elbow joint, which is important for capturing the anatomy in detail and minimizing any potential distortion during the imaging process. In radiography, especially for the elbow, the focus is on ensuring that the entire joint, including the surrounding soft tissues and bones, is visible without unnecessary excess space that could complicate interpretation. Using a smaller cassette, such as half of a larger size, can help in positioning the elbow effectively and reducing exposure to surrounding areas, which may not be clinically relevant. A horizontal orientation is particularly beneficial in this case as it aligns the long axis of the elbow joint with the imaging plane, promoting better visualization of the joint structure and any potential pathological conditions. This approach enhances radiographic quality and helps ensure that the views are diagnostic and clear. Choosing a different size or orientation would not provide the same efficiency or clarity needed for this specific projection, thus confirming that the best choice in this scenario is indeed half of a 10" x 12" cassette in a horizontal position.*

## 5. Where is the central ray directed for an AP Thoracic X-ray?

- A. At the level of the xiphoid process
- B. 1.5" below T1
- C. 1.5" above T1**
- D. At the mid-point of the film

The central ray for an AP (anterior-posterior) Thoracic X-ray is directed to a point approximately 1.5 inches above the first thoracic vertebra (T1). This positioning ensures that the maximum volume of the thoracic cavity is included in the radiographic field, allowing for a comprehensive view of thoracic structures, including the lungs, heart, and surrounding anatomy. Positioning the central ray at this specific location helps to align the X-ray beam perpendicularly to the area of interest, which is crucial for achieving a clear and diagnostic image. This technique also compensates for the curvature of the spine, ensuring that the X-ray provides an accurate representation of the thoracic anatomy without distortion that may occur if the central ray is directed elsewhere. The other choices do not provide the correct point of focus for the thoracic region, which is why they are less suited for an accurate AP thoracic X-ray. The correct cranial placement relative to T1 is essential for effective imaging in this area.

## 6. For proper patient positioning in APOM, how should the incisors be aligned?

- A. Above the base of occiput
- B. In line with the base of occiput**
- C. Below the mastoid process
- D. In a straight line with the sternum

In an anteroposterior open mouth (APOM) projection, proper patient positioning is crucial for obtaining a clear and diagnostic image of the cervical spine, particularly the first and second cervical vertebrae. The alignment of the incisors is essential for accurate positioning and ensures that the radiographic beam is properly centered. When the incisors are aligned in line with the base of the occiput, this positioning helps to maintain the correct anatomical relationship between the skull and the cervical spine. It aids in minimizing distortion and allows for optimal visualization of the upper cervical vertebrae, including the atlas and axis, as well as the atlanto-occipital joint. Aligning the incisors in this position helps to ensure that the image produced is not only clear but also provides the necessary anatomical details needed for diagnostic interpretation. By maintaining this alignment, radiologists and healthcare providers can better assess any potential abnormalities or conditions affecting the cervical spine.

## 7. What FFD is recommended for a lateral coccyx projection?

- A. 38"
- B. 36"
- C. 40"**
- D. 42"

For a lateral coccyx projection, the recommended focal film distance (FFD) is 40 inches. This distance is crucial as it helps minimize distortion of the image while ensuring optimal detail and clarity in the resultant radiograph. When imaging the coccyx, achieving the correct FFD is particularly important due to the anatomical intricacies and the position of the coccyx. A distance of 40 inches allows for a good balance between magnification and the sharpness of the bony structures being imaged. Setting the FFD at this distance also aligns with standard practices in radiology, which prioritize consistent distances to maintain high-quality imaging across various projections. By utilizing the recommended FFD, radiologic technologists can enhance diagnostic accuracy, ensuring that clinicians have reliable images for assessment and treatment planning.

**8. What is the maximum collimation size for the AP/PA sacrum projection?**

- A. 8" x 10"
- B. 9" x 11"**
- C. 10" x 12"
- D. 11" x 14"

*The maximum collimation size for the AP/PA sacrum projection is 9" x 11". This specific measurement is important in radiography as it helps to limit the area of radiation exposure to the patient while ensuring that the necessary anatomy is included in the image. Valid collimation is essential for both patient safety and image quality. By using the appropriate collimation size for this projection, radiographers can focus on the area of interest, in this case, the sacrum, while minimizing the exposure to surrounding tissues. Larger collimation sizes would be unnecessary for the AP/PA sacrum projection, as they could increase the patient exposure without contributing to diagnostic information, meaning the narrower dimensions effectively meet clinical needs while adhering to the principles of radiation protection. Thus, the 9" x 11" collimation size is both recommended and practical for this specific radiographic view.*

**9. What is a key consideration when placing the foot on the cassette for an AP foot X-ray?**

- A. The foot must be angled at 30°
- B. The sole of the foot must be on the cassette**
- C. The toes must be extended past the edge
- D. The heel must be dropped back

*The key consideration when placing the foot on the cassette for an AP foot X-ray is that the sole of the foot must be flat against the cassette. This positioning ensures that the X-ray image accurately captures the anatomical structures of the foot without distortion. A proper placement helps in obtaining a clear and diagnostic image, which is crucial for identifying any potential fractures or abnormalities. When the sole is in contact with the cassette, it allows for the foot to be properly aligned and positioned for the imaging process. The lack of angling or elevation helps in minimizing any foreshortening of the foot, resulting in a more accurate representation of the bones and tissues. While other considerations like the angle of the foot or the positioning of the toes and heel play a role in imaging, ensuring that the sole is flat against the cassette is fundamental for achieving a high-quality X-ray.*

**10. What is the proper hand positioning for internal rotation of the shoulder?**

- A. Hand is supinated
- B. Hand is externally rotated
- C. Hand is internally rotated with dorsal aspect along the body**
- D. Hand is placed on the hip

*In internal rotation of the shoulder, the proper hand positioning is with the hand internally rotated, meaning that the dorsal aspect of the hand is placed along the body. This positioning allows the humerus to rotate inward. When the hand is in this position, it creates a more accurate representation of the internal structures of the shoulder joint during imaging, ensuring that the proper anatomy is highlighted and reducing the risk of superimposing other structures over the area of interest. The internal rotation technique is critical, especially when acquiring images for diagnostic purposes, as it aids in visualizing the glenohumeral joint and surrounding tissues. Achieving the correct positioning is essential for obtaining clear images that can assist in identifying potential injuries or pathology in the shoulder area.*

## 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:

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

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