

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 aspect of the patient's anatomy should be included when collimating for the external rotation of the shoulder?**
 - A. Only the shoulder
 - B. Shoulder joint, soft tissues, and deltoid tuberosity
 - C. Only soft tissues
 - D. Shoulder and clavicle
- 2. What is the required tube tilt for an external rotation of the shoulder?**
 - A. 15 degrees
 - B. 30 degrees
 - C. none
 - D. 45 degrees
- 3. What should the collimation for the AP elbow include?**
 - A. Elbow joint only
 - B. Distal humerus and proximal radius and ulna with soft tissue
 - C. Just the radius
 - D. Humerus only
- 4. What is the recommended cassette size for a PA hand X-ray?**
 - A. 1/2 of 10" x 12" horizontal orientation
 - B. 8" x 10" if patient's hand is too large
 - C. 1/3rd of 10" x 12" vertical orientation
 - D. Both A and B are correct
- 5. How should the patient's mouth be positioned for APOM imaging?**
 - A. Closed tightly
 - B. As wide as possible
 - C. Slightly open
 - D. In a relaxed position
- 6. What positioning should a patient's leg be in for a Frog-Leg Lateral X-ray?**
 - A. Internally rotated
 - B. Externally rotated
 - C. Neutral position
 - D. Bent at 90 degrees

7. In an AP lumbo-pelvic x-ray, where is the central ray directed?
- A. At the iliac crest
 - B. 1" above the iliac crest
 - C. 1" below the iliac crest
 - D. At the center of the film
8. For the oblique cervical view, what is the preferred tube tilt direction?
- A. Anterior 15° caudad
 - B. Posterior 15° cephalad
 - C. Lateral 10°
 - D. No tilt required
9. What size cassette is required for an AP hip projection?
- A. 8" x 10"
 - B. 10" x 12"
 - C. 14" x 17"
 - D. 12" x 15"
10. What is the purpose of having the knee flexed during a lateral knee X-ray?
- A. To reduce radiation exposure
 - B. To improve joint visualization
 - C. To position the leg correctly
 - D. To avoid overlapping tissues

Answers

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

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Explanations

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1. What aspect of the patient's anatomy should be included when collimating for the external rotation of the shoulder?

- A. Only the shoulder
- B. Shoulder joint, soft tissues, and deltoid tuberosity**
- C. Only soft tissues
- D. Shoulder and clavicle

In external rotation of the shoulder, it is essential to ensure that the collimation encompasses the shoulder joint itself, adjacent soft tissues, and the deltoid tuberosity. This approach ensures a comprehensive view that not only highlights the shoulder joint but also includes relevant surrounding structures that may provide critical information for diagnosis and treatment. Including the shoulder joint is vital for assessing joint alignment and integrity, while incorporating the soft tissues allows for evaluation of any potential injuries, swelling, or other pathologies that may not be directly associated with the bony structures but still affect the overall anatomy and function of the shoulder. The deltoid tuberosity is a significant anatomical landmark, aiding in determining the orientation of the humerus and the extent of any possible injuries or dislocations in relation to the bony landmarks. This thorough collimation technique enhances the diagnostic quality of the radiographic image, allowing healthcare professionals to make more accurate assessments and decisions regarding patient care.

2. What is the required tube tilt for an external rotation of the shoulder?

- A. 15 degrees
- B. 30 degrees
- C. none**
- D. 45 degrees

In external rotation of the shoulder, the positioning of the X-ray tube does not require any tilt. When performing this view, the patient's arm is rotated externally, allowing the greater tubercle of the humerus to be clearly visualized in profile. The anatomical alignment and orientation achieved through the external rotation provide adequate visualization of the shoulder structures without the need for additional angulation of the X-ray tube. This approach ensures that the shoulder joint is captured in a true anatomical position, which is crucial for accurate diagnosis and assessment. A direct central beam perpendicular to the film or detector is sufficient, allowing for optimal imaging without the complexity that would be introduced by tilting the tube. Hence, the correct answer reflects the necessity for a neutral tube positioning for this particular X-ray projection.

3. What should the collimation for the AP elbow include?

- A. Elbow joint only
- B. Distal humerus and proximal radius and ulna with soft tissue**
- C. Just the radius
- D. Humerus only

The collimation for the anteroposterior (AP) elbow should include the distal humerus and proximal radius and ulna, along with any surrounding soft tissue. This comprehensive collimation ensures that the entire area of interest is included in the radiographic field, which is essential for accurate imaging and diagnosis. Including the distal humerus is crucial as it allows the radiologist to assess any potential fractures or abnormalities in the elbow joint. Similarly, including the proximal radius and ulna ensures that any relevant pathology in these areas is visible. The addition of soft tissue in the collimation margin is important because it provides context for any findings in the bony structures and can aid in the assessment of swelling or other soft tissue injuries that may accompany elbow conditions. This approach maximizes image quality while minimizing radiation exposure to surrounding tissues since proper collimation limits the area being exposed. A well-collimated radiograph enhances diagnostic accuracy and is a key part of effective radiographic technique.

4. What is the recommended cassette size for a PA hand X-ray?

- A. 1/2 of 10" x 12" horizontal orientation
- B. 8" x 10" if patient's hand is too large
- C. 1/3rd of 10" x 12" vertical orientation
- D. Both A and B are correct**

For a PA hand X-ray, using appropriate cassette sizes is crucial for obtaining clear images while ensuring that the entire anatomical area of interest is captured adequately. The typical recommended cassette size for this type of exam is often the 8" x 10" configuration, which provides a sufficient field of view for most patients. The option stating that a half-size cassette of 10" x 12" in horizontal orientation could be used typically caters to specific situations, such as when accommodating smaller hands or varying patient sizes. This offers flexibility based on the individual characteristics of the patient, ensuring the X-ray can be performed effectively without compromising the quality of the image. When considering larger hands, the option for an 8" x 10" cassette ensures that even if the hand is substantially larger than average, it still fits comfortably onto the imaging surface, thereby avoiding any clipping of the anatomy. Therefore, both choices provide appropriate guidelines for selecting the correct cassette size based on patient variations, making them collectively suitable for the X-ray procedure.

5. How should the patient's mouth be positioned for APOM imaging?

- A. Closed tightly
- B. As wide as possible**
- C. Slightly open
- D. In a relaxed position

For an Anterior-Posterior Open Mouth (APOM) imaging, the patient's mouth should be positioned as wide as possible. This positioning allows for optimal visualization of the odontoid process (dens) and the lateral masses of the atlas. When the mouth is wide open, it creates a clear path for the x-ray beam to capture the necessary anatomical structures without obstruction from the teeth or alveolar structures, ensuring that the images are diagnostic and clear. The open-mouth position also helps to align the cervical spine in a way that minimizes superimposition of adjacent structures, which is crucial for accurate interpretation of the images. This imaging technique is specifically designed to evaluate the upper cervical spine and the relationship between the dens and the atlas, making proper mouth positioning vital for effective imaging.

6. What positioning should a patient's leg be in for a Frog-Leg Lateral X-ray?

- A. Internally rotated
- B. Externally rotated**
- C. Neutral position
- D. Bent at 90 degrees

For a Frog-Leg Lateral X-ray, the patient's leg should be positioned in external rotation. This positioning is crucial as it allows the femoral necks to be parallel with the imaging receptor, providing a clear view of the acetabulum and allowing for proper visualization of the hip joint. The external rotation opens up the hip joint, making it easier to assess for any abnormalities such as fractures, dislocations, or developmental dysplasia. In this position, the knees are placed together while the feet are positioned away from each other, resembling a frog's legs, which is how the name of the technique is derived. This orientation is essential for obtaining accurate diagnostic images. Therefore, external rotation is the required positioning for the Frog-Leg Lateral X-ray to ensure optimal imaging of the hip area.

7. In an AP lumbo-pelvic x-ray, where is the central ray directed?

- A. At the iliac crest
- B. 1" above the iliac crest
- C. 1" below the iliac crest**
- D. At the center of the film

In an AP lumbo-pelvic x-ray, the central ray is directed 1 inch below the iliac crest. This positioning is crucial to ensure that the lumbar spine and the pelvic area are accurately represented in the image. By centering the beam at this specified location, radiologic technologists can capture the lumbar vertebrae and the sacroiliac joints clearly, minimizing the risk of missing important anatomical structures and providing valuable diagnostic information. Positioning the central ray too high, such as at the iliac crest or 1 inch above it, would likely result in the loss of critical details from the upper lumbar spine or may not sufficiently include the sacral region. Directing it at the center of the film does not provide the same precision needed for assessing the specific areas of interest in the lumbar-pelvic region. Therefore, the most effective practice is to aim the central ray 1 inch below the iliac crest for optimal imaging in an AP lumbo-pelvic x-ray.

8. For the oblique cervical view, what is the preferred tube tilt direction?

- A. Anterior 15° caudad**
- B. Posterior 15° cephalad
- C. Lateral 10°
- D. No tilt required

For the oblique cervical view, the preferred tube tilt direction is anterior 15° caudad. This angle is important as it helps to properly visualize the cervical spine by accommodating for the natural curvature of the spine and ensuring that the pertinent anatomical structures are clearly demonstrated. The anterior tilt directs the x-ray beam downward toward the target area, which is especially crucial in preventing superimposition of structures in the cervical region. This positioning reduces the shadows cast by the mandible and the vertebrae, allowing for better visualization of the intervertebral foramina and the cervical vertebrae itself. In practice, a 15° caudad angle corrects for the lordotic curve of the cervical spine and ensures that the beam is directed appropriately to the area of interest, enhancing clarity and detail in the images produced. By using this specific tilt, radiologists and technicians can achieve a more diagnostic image, assisting in accurate diagnoses and treatment planning.

9. What size cassette is required for an AP hip projection?

- A. 8" x 10"
- B. 10" x 12"**
- C. 14" x 17"
- D. 12" x 15"

The correct size of the cassette for an anteroposterior (AP) hip projection is typically 10" x 12". This standard size is designed to adequately cover the area of interest for the hip joint while still being manageable in terms of positioning and handling during the imaging process. The 10" x 12" format allows for sufficient detail to be captured, ensuring that the structures of the hip joint, including the femoral head, neck, and acetabulum, are included in the radiographic image. Using other sizes such as 8" x 10" would likely be insufficient to encompass the entire hip area, potentially missing critical anatomical details. The 14" x 17" and 12" x 15" sizes, while larger and capable of capturing more area, may not be necessary for an AP hip projection and can introduce complications in positioning and increased exposure to radiation to surrounding tissues unnecessarily. Therefore, 10" x 12" strikes an optimal balance for both image quality and practical use in hip radiography.

10. What is the purpose of having the knee flexed during a lateral knee X-ray?

- A. To reduce radiation exposure
- B. To improve joint visualization**
- C. To position the leg correctly
- D. To avoid overlapping tissues

Having the knee flexed during a lateral knee X-ray is essential for improving joint visualization. When the knee is flexed, the alignment of the femur and tibia is optimized, allowing for clearer images of the joint structures, including the patella, joint space, and surrounding soft tissues. This position helps to separate overlapping structures, making it easier for radiologists to assess for any abnormalities such as fractures, joint effusions, or degenerative changes. In contrast, other reasons typically associated with X-ray positioning, such as reducing radiation exposure or avoiding overlapping tissues, are not the primary function of flexing the knee in this context. Proper positioning is critical, but the focus during a lateral knee X-ray is specifically on enhancing the view of the joint itself to aid in accurate diagnosis.

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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:

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

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