

RADIOGRAPHIC SEMINAR EXAM 2 PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

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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. Why are the paranasal sinuses imaged in the erect position?**
 - A. To demonstrate air-fluid levels
 - B. To reduce motion
 - C. To improve contrast
 - D. To increase patient comfort
- 2. An AP lordotic chest projection is correct if which is visualized?**
 - A. The clavicles superior to the apices
 - B. The ribs magnified
 - C. The heart magnified
 - D. The diaphragms superimposed on the lungs
- 3. Excessive noise suppression of a digital image can result in which of the following problems?**
 - A. Loss of spatial resolution
 - B. Increased contrast
 - C. Higher dynamic range
 - D. Improved sharpness
- 4. Which part of the x-ray tube becomes negatively charged during exposure?**
 - A. Cathode
 - B. Anode
 - C. Focusing cup
 - D. Rotor
- 5. Short scale radiography yields which level of contrast?**
 - A. High contrast
 - B. Low contrast
 - C. Moderate contrast
 - D. No contrast

- 6. Which of the following would require a lateral rotation for its oblique position?**
- A. Second Toe
 - B. First Molar
 - C. Twelfth Thoracic Vertebra
 - D. Fifth Toe
- 7. According to the Bureau of Radiation Health, which radiographic procedure delivers the greatest gonadal dose to a female patient?**
- A. Mammography
 - B. Upper GI series
 - C. Barium Enema
 - D. Chest radiography
- 8. Which statement best describes the structures entering the lungs at the hilum?**
- A. The central venous and arterial structures entering the lungs
 - B. The diaphragmatic dome
 - C. The peripheral lung edges
 - D. The mediastinal pleura
- 9. When there are STAT requests in the emergency room and you are asked to do a quick chest exam for a physician, what is the appropriate response?**
- A. Do the chest exam immediately
 - B. Ignore the requests
 - C. Explain there are STAT requests and complete those first, then page the physician
 - D. Defer to your supervisor
- 10. For the axial calcaneus projection, which direction is the 40-degree tilt oriented?**
- A. Caudad
 - B. Anterior
 - C. Cephalad
 - D. Lateral

Answers

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

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Explanations

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1. Why are the paranasal sinuses imaged in the erect position?

A. To demonstrate air-fluid levels

B. To reduce motion

C. To improve contrast

D. To increase patient comfort

Air-fluid levels are best demonstrated with the patient upright because gravity makes any fluid in the sinuses settle and form a distinct interface with air. This horizontal fluid level is a key sign of sinusitis on radiographs. When lying down, the fluid spreads and the level isn't as visible, making it harder to detect. So imaging the paranasal sinuses erect directly enhances the ability to see these levels, which is why that position is chosen.

2. An AP lordotic chest projection is correct if which is visualized?

A. The clavicles superior to the apices

B. The ribs magnified

C. The heart magnified

D. The diaphragms superimposed on the lungs

The main idea is to visualize the lung apices without clavicular overlap. In an AP lordotic chest projection, the patient is positioned so the chest is tilted back, which makes the clavicles ride up and lie above the apices. Seeing the clavicles superior to the apices means the apical lungs are not obscured and the view is demonstrated correctly. Features like magnified ribs or heart aren't the defining indication of a proper lordotic projection, and diaphragms overlapped by lung markings would suggest suboptimal positioning. This view specifically helps assess apical regions for pathology such as TB or apical pneumothorax.

3. Excessive noise suppression of a digital image can result in which of the following problems?

A. Loss of spatial resolution

B. Increased contrast

C. Higher dynamic range

D. Improved sharpness

Excessive noise suppression reduces spatial resolution because fine details and edges live in the high-frequency content of an image. When you denoise aggressively, you attenuate or remove a lot of those high-frequency components, not just the random noise. The true signal—the small features and sharp transitions between areas—gets blurred along with the noise, so nearby structures can no longer be distinguished clearly. This is why overwhelming noise suppression degrades sharpness and detail. Increased contrast or dynamic range aren't achieved by denoising and, in fact, over-smoothing tends to soften edges rather than improve these attributes.

4. Which part of the x-ray tube becomes negatively charged during exposure?

A. Cathode

B. Anode

C. Focusing cup

D. Rotor

During exposure, the negative voltage sits on the cathode. The cathode is heated and emits electrons (thermionic emission), producing the electron beam that is then attracted to the positively charged anode. The focusing cup, part of the cathode assembly, is also kept at a negative potential to help shape the beam, but the source of the electrons and the main negative charge is the cathode itself. The anode is positively charged to pull the electrons across, and the rotor is a mechanical part that doesn't become the negative electrode.

5. Short scale radiography yields which level of contrast?

A. High contrast

B. Low contrast

C. Moderate contrast

D. No contrast

Short scale radiography yields high contrast. Contrast is the difference in density seen on the image between adjacent tissues. When the scale is short, there are only a few gray tones, so differences between structures are stark. This happens with lower kVp and high subject contrast, where dense tissues like bone attenuate the beam far more than soft tissue, making bone appear very white against a darker background and soft tissues appear in limited gray shades. If you raise kVp, the image has more gray levels and lower contrast—longer scale.

6. Which of the following would require a lateral rotation for its oblique position?

A. Second Toe

B. First Molar

C. Twelfth Thoracic Vertebra

D. Fifth Toe

Rotating a body part to an oblique position is about opening joint spaces and reducing overlap, achieved by turning the part toward a specific side. For toes, the direction of rotation is chosen to separate the toes enough to visualize the joints. The little toe sits on the outer edge of the foot, so turning the foot outward (lateral rotation) places the fifth toe in an oblique plane that minimizes overlap with the adjacent toes and clearly shows its joints. That makes lateral rotation the correct approach for this toe's oblique view. The second toe would typically be rotated toward the midline to reduce overlap with the big toe, not outward. A molar tooth oblique view is addressed differently in dental radiography, not by rotating the toe. And imaging the twelfth thoracic vertebra obliquely aims to open the thoracic zygapophyseal joints, which involves torso rotation rather than lateral rotation of a toe.

7. According to the Bureau of Radiation Health, which radiographic procedure delivers the greatest gonadal dose to a female patient?

- A. Mammography
- B. Upper GI series
- C. Barium Enema**
- D. Chest radiography

Gonadal dose tracked in radiography is highest when the reproductive organs lie in or near the path of the X-ray beam for a relatively long time, especially during fluoroscopic procedures. A barium enema requires imaging of the large intestine with the beam passing through the pelvic region and often involves extended fluoroscopy and multiple radiographs to ensure the colon is adequately outlined. That combination means the ovaries receive more radiation than in the other listed exams. Mammography focuses on the breasts with shielding and the ovaries are well outside the beam, upper GI series targets the upper abdomen with less pelvic exposure, and chest radiography involves the thorax with minimal involvement of the pelvic area. Therefore, the greatest gonadal dose for a female among these procedures is the barium enema.

8. Which statement best describes the structures entering the lungs at the hilum?

- A. The central venous and arterial structures entering the lungs**
- B. The diaphragmatic dome
- C. The peripheral lung edges
- D. The mediastinal pleura

The hilum is the lung's root, the point where vessels and airways connect the lung to the mediastinum. The main structures entering the lungs at this location are the central vessels—the pulmonary arteries bringing blood from the heart to the lungs and the pulmonary veins returning blood to the heart. These are the core channels that physically enter and exit the lung at the hilum, forming the essential vascular link of the root. The diaphragmatic dome sits at the bottom boundary of the thorax, not at the hilum. The peripheral lung edges are the lung margins, not entry points. The mediastinal pleura lines the space around the hilum but isn't describing the entering structures.

9. When there are STAT requests in the emergency room and you are asked to do a quick chest exam for a physician, what is the appropriate response?

- A. Do the chest exam immediately
- B. Ignore the requests
- C. Explain there are STAT requests and complete those first, then page the physician**
- D. Defer to your supervisor

In an ER, orders labeled STAT are time-sensitive and demand immediate attention because they can affect life-saving decisions. When you're asked to do a quick chest exam but there are STAT requests pending, the responsible move is to acknowledge that there are STAT tasks and address them first—either start them or ensure they're being acted upon—before proceeding with non-urgent requests. Once the STAT work is in motion or completed, page the physician to inform them that the chest exam is ready or to receive further instructions. This sequence prioritizes patient safety by not delaying critical, time-sensitive orders, while still ensuring the physician is aware and involved. Ignoring STATs or deferring to a supervisor would not meet the urgency demanded in the situation, and performing the chest exam without addressing the STAT requests could delay essential care.

10. For the axial calcaneus projection, which direction is the 40-degree tilt oriented?

- A. Caudad
- B. Anterior
- C. Cephalad**
- D. Lateral

In the axial calcaneus view, the beam is tilted toward the head (cephalad) by about 40 degrees. This cephalad angle aligns the x-ray beam with the calcaneus' axis so the heel bone is projected without excessive overlap from the talus and the subtalar joint is opened. Placing the plantar surface up and directing the beam cephalad gives a clear image of the calcaneal tuberosity and calcaneal body. Tilting in other directions would not produce the intended projection and could obscure anatomy.

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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:

<https://radiographicseminar2.examzify.com>

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

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