

DIGITAL IMAGING 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. In PACS CQI, which activity is specifically aimed at identifying images that cannot be interpreted due to poor quality?**
 - A. Recognition of nondiagnostic images
 - B. File format conversion
 - C. Patient demographics verification
 - D. Secure data transmission
- 2. Digitally placed anatomic markers can always determine the correct anatomic side of the patient.**
 - A. True
 - B. False
 - C. Sometimes
 - D. Not applicable
- 3. Which memory type is volatile, losing stored data when power is removed?**
 - A. ROM
 - B. RAM
 - C. Cache
 - D. Flash
- 4. In which type of workstation can changes not be made to the patient demographics of an image set?**
 - A. Review workstation
 - B. Display workstation
 - C. Diagnostic workstation
 - D. Archive workstation
- 5. Which term describes a health information data warehouse used for analysis rather than patient care?**
 - A. CDW
 - B. EHR
 - C. EMR
 - D. PHI

- 6. In a CCD imaging system, the signal charge is stored in which component before readout?**
- A. Capacitors
 - B. Diodes
 - C. Transistors
 - D. Wires
- 7. The layer in a CCD chip that contains the electron gates is the:**
- A. Polysilicon layer
 - B. Silicon dioxide layer
 - C. Metal layer
 - D. Glass layer
- 8. In CMOS technology, which transistors are used to form the electrically controlled gate?**
- A. Only N-type transistors
 - B. Only P-type transistors
 - C. Both N-type and P-type transistors
 - D. Neither
- 9. What PACS CQI activity documents images that are of poor quality?**
- A. Recognition of nondiagnostic images
 - B. Repair of corrupted files
 - C. Automatic histogram equalization
 - D. Archival of high-resolution copies
- 10. What is done after the installation of new equipment to determine if the equipment is performing to vendor specifications?**
- A. Acceptance Testing
 - B. Calibration
 - C. Acceptance Criteria
 - D. Downtime Testing

Answers

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

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Explanations

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1. In PACS CQI, which activity is specifically aimed at identifying images that cannot be interpreted due to poor quality?

- A. Recognition of nondiagnostic images**
- B. File format conversion
- C. Patient demographics verification
- D. Secure data transmission

In PACS CQI, the central aim is to ensure every image can be interpreted reliably. Recognizing nondiagnostic images directly targets this goal by identifying cases where the image quality is insufficient for a confident read. When an image cannot be interpreted due to factors like motion blur, improper exposure, or positioning artifacts, it may need to be retaken or adjusted, which improves diagnostic accuracy, reduces repeat scans, and enhances workflow. The other activities serve important quality or safety functions but do not address interpretability. File format conversion relates to compatibility and data handling, patient demographics verification ensures correct patient identification, and secure data transmission focuses on protecting information integrity and privacy.

2. Digitally placed anatomic markers can always determine the correct anatomic side of the patient.

- A. True
- B. False**
- C. Sometimes
- D. Not applicable

The ability to determine which side of the patient you're looking at cannot rely solely on digitally placed markers. Markers can be added after exposure, mispositioned, reversed, or cropped out, and image flipping or software changes can invert or obscure them. Even when a digital marker exists, it may not be visible in all views or could be placed on the wrong side during post-processing. Because of these risks, side determination should be corroborated with proper labeling from the imaging session, patient identifiers, and, whenever possible, physical lateral markers placed at the time of exposure and checked across all projections.

3. Which memory type is volatile, losing stored data when power is removed?

- A. ROM
- B. RAM**
- C. Cache
- D. Flash

Volatile memory is designed to lose its stored data when power is removed. The main type that fits this behavior is RAM, the temporary workspace the computer uses to hold data and instructions while programs run. Because RAM needs continuous power to maintain its contents, turning off the computer clears everything stored in it. ROM and Flash, in contrast, are non-volatile—they keep their data without power, which is why they're used for firmware and long-term storage. Cache is also a volatile memory used to speed up CPU access, so its contents disappear when power is cut as well, but the question points to the general, standard example of volatile memory, which is RAM.

4. In which type of workstation can changes not be made to the patient demographics of an image set?

- A. Review workstation**
- B. Display workstation
- C. Diagnostic workstation
- D. Archive workstation

The main idea here is that editing patient demographics is a data-management privilege controlled by how a workstation is used in a radiology workflow. A review workstation is designed for clinicians to view and interpret studies and to add notes or annotations, but it does not allow changes to the patient's demographic information in the image set. This preserves the integrity and consistency of patient data across systems, since demographic edits should be made only through the hospital information system or the modality's patient-management workflow, not at a review screen. Other workstations are primarily intended for viewing or archival purposes, or for diagnostic interpretation, but the key point is that the review workstation is the one explicitly positioned as a read-only environment for patient data, avoiding any edits to demographics.

5. Which term describes a health information data warehouse used for analysis rather than patient care?

- A. CDW**
- B. EHR
- C. EMR
- D. PHI

A Clinical Data Warehouse is a health information data warehouse designed for analysis rather than day-to-day patient care. It collects and harmonizes data from multiple source systems—such as EHRs/EMRs, lab, imaging, and billing—then stores it in a structured way that supports complex queries, trend analysis, and research across large patient populations. This analytics focus lets organizations generate quality reports, run clinical studies, and perform population health analytics without impacting clinical workflows. In contrast, electronic health records and electronic medical records are created to document and support direct patient care at the point of service, not for broad analytical use. PHI refers to protected health information, a privacy concept rather than a type of data repository.

6. In a CCD imaging system, the signal charge is stored in which component before readout?

- A. Capacitors**
- B. Diodes
- C. Transistors
- D. Wires

In a CCD, the light-generated signal is stored in the potential wells created under the gate electrodes of each pixel. These wells act like tiny capacitors, holding a packet of electrons until the charge is clocked out. The amount of charge in a well represents the light level for that pixel, and later the charge is shifted through the serial readout and converted to a voltage at the output. Diodes aren't used to store the signal in a CCD pixel, transistors are used to move the charge around but not to hold it for the entire exposure, and wires don't provide the storage function either. The key idea is that the pixel's charge sits in a capacitive well before readout.

7. The layer in a CCD chip that contains the electron gates is the:

- A. Polysilicon layer**
- B. Silicon dioxide layer
- C. Metal layer
- D. Glass layer

In a CCD, the gates that control how charge is moved are made as a polysilicon layer. This polysilicon is patterned into the individual gate electrodes and sits atop a thin silicon dioxide insulating layer on the silicon substrate. By applying voltages to this polysilicon gate layer, the electric potential wells that trap and move electrons are created and steered along the device. The silicon dioxide layer is simply the insulating layer beneath the gates, metal layers, if present, are usually for wiring, and a glass layer isn't part of the CCD gate structure. So the layer that contains the electron gates is the polysilicon layer.

8. In CMOS technology, which transistors are used to form the electrically controlled gate?

- A. Only N-type transistors
- B. Only P-type transistors
- C. Both N-type and P-type transistors**
- D. Neither

In CMOS logic, both N-type and P-type transistors are used to form the gate. The input controls a complementary pair: when the input is high, the NMOS turns on and pulls the output toward ground; when the input is low, the PMOS turns on and pulls the output up to Vdd. This arrangement gives a strong, full-range output and minimal static power consumption because, at any steady state, only one path conducts. Relying on a single type would either fail to drive the output cleanly to the opposite rail or waste power, whereas using both types together provides efficient, rail-to-rail switching.

9. What PACS CQI activity documents images that are of poor quality?

- A. Recognition of nondiagnostic images**
- B. Repair of corrupted files
- C. Automatic histogram equalization
- D. Archival of high-resolution copies

In PACS CQI, the important practice is recognizing when an image cannot be interpreted due to quality issues and documenting that status for quality improvement. This involves flagging nondiagnostic images so the team can track how often they occur and investigate causes like equipment problems, patient motion, or protocol errors. Logging these cases creates data for root-cause analysis, training, and process changes to reduce repeats and improve patient care. The other options don't fit this documenting-and-tracking role. Repairing corrupted files is a remediation action taken after a problem is found, not the documentation of a quality issue. Automatic histogram equalization is a processing technique that can enhance image appearance, not a record of poor-quality images. Archiving high-resolution copies concerns storage and preservation rather than identifying and documenting images that are nondiagnostic.

10. What is done after the installation of new equipment to determine if the equipment is performing to vendor specifications?

A. Acceptance Testing

B. Calibration

C. Acceptance Criteria

D. Downtime Testing

Acceptance testing is the step used after installing new equipment to verify it performs according to vendor specifications. This involves running a predefined, structured set of tests that simulate real operating conditions and measuring results against the vendor's performance criteria. The goal is to confirm the unit meets the required functionality, safety, and interoperability before it's accepted for normal use. Calibration focuses on adjusting measurement instruments so their readings are accurate, which is not the same as proving the equipment meets overall performance specs. Acceptance criteria are the standards or requirements themselves, not the testing activity used to verify them. Downtime testing isn't the standard term for this verification step and doesn't inherently cover assessing performance against vendor specifications.

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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://digitalimaging.examzify.com>

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

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