

Diagnostic Tests and Procedures Practice Test (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

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- 1. Which test uses radioactive iodine to create an image of the thyroid gland?**
 - A. Ultrasound of the thyroid**
 - B. Thyroid scan**
 - C. CT scan of the neck**
 - D. MRI of the neck**

- 2. If contrast administration is contraindicated, which CT protocol is preferred to evaluate urinary stones?**
 - A. Non-contrast CT**
 - B. Ultrasound**
 - C. MRI with contrast**
 - D. CT urography**

- 3. Test that determines whether the urine of a newborn contains phenylketones is called?**
 - A. PKU test**
 - B. Potassium test**
 - C. PSA**
 - D. Prothrombin Time**

- 4. Visual examination of a body cavity or canal with a lighted instrument called an endoscope?**
 - A. Esophagoscopy**
 - B. Endoscopy**
 - C. Gastroscopy**
 - D. ERCP**

- 5. Visual examination of the esophagus?**
 - A. Gastroscopy**
 - B. Endoscopy**
 - C. Esophagoscopy**
 - D. Esophagogastroduodenoscopy**

- 6. Which imaging modality uses multiple views to create cross-sectional images of the body?**
- A. Computed Tomography**
 - B. Magnetic Resonance Imaging**
 - C. Ultrasound**
 - D. X-ray Radiography**
- 7. How does a noninvasive vascular study via Doppler ultrasound help diagnose arterial occlusion?**
- A. Visualizes the arterial lumen with high-detail CT.**
 - B. Measures blood flow velocity and waveforms; abnormal waveforms indicate stenosis or occlusion.**
 - C. Measures blood oxygen saturation in tissues.**
 - D. Replaces MRI in all cases.**
- 8. Which test measures the percentage of erythrocytes in a volume of blood?**
- A. Fecal occult blood test**
 - B. Hematocrit (Hct)**
 - C. Laryngoscopy**
 - D. Glucose tolerance test**
- 9. What is a key difference between CT and MRI in terms of safety and contraindications?**
- A. CT uses ionizing radiation and iodinated contrast; MRI uses strong magnetic fields; contraindicated with certain implants and ferromagnetic devices; gadolinium risk in CKD.**
 - B. CT uses no radiation; MRI uses strong magnetic fields.**
 - C. CT is contraindicated with implants; MRI is safe with any implant.**
 - D. CT uses gadolinium contrast; MRI uses iodinated contrast.**
- 10. Which test measures the amount of albumin in the blood?**
- A. Audiometry**
 - B. Albumin test**
 - C. Amniocentesis**
 - D. Bilirubin**

Answers

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

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Explanations

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1. Which test uses radioactive iodine to create an image of the thyroid gland?

- A. Ultrasound of the thyroid**
- B. Thyroid scan**
- C. CT scan of the neck**
- D. MRI of the neck**

The main idea is imaging thyroid function using a radioactive tracer. In a thyroid scan, a small amount of radioactive iodine (typically I-123) is given and the thyroid tissue takes it up. A gamma camera then captures the distribution of radioactivity, producing an image that shows both the size and shape of the gland and how actively different parts are functioning. This helps identify diffuse changes, hot or cold nodules, and overall uptake patterns. Ultrasound images the thyroid with sound waves and provides anatomy without radiation. CT uses X-rays to create cross-sectional pictures, sometimes with contrast, but it doesn't depend on iodine uptake by the thyroid. MRI uses magnetic fields to image soft tissues without radioactive tracers. Because they don't rely on radioactive iodine uptake, these tests don't produce images of thyroid function in the same way as a thyroid scan.

2. If contrast administration is contraindicated, which CT protocol is preferred to evaluate urinary stones?

- A. Non-contrast CT**
- B. Ultrasound**
- C. MRI with contrast**
- D. CT urography**

When evaluating suspected urinary stones, you want an imaging method that shows calcifications clearly without introducing anything that could mask or complicate interpretation. Stones appear as dense, bright structures on CT, and non-contrast images maximize their visibility while also allowing quick assessment of any resulting obstruction or hydronephrosis. Injecting contrast can blur or obscure stones and is unnecessary for detecting stones, so if contrast is contraindicated you skip contrast-enhanced protocols. CT urography relies on IV contrast to evaluate the entire urinary tract, which is exactly what you want when contrast can be used; but in this scenario it's not, so this approach isn't suitable. Ultrasound is useful for detecting hydronephrosis and can sometimes reveal stones, but it's less sensitive for stones, especially in the distal ureter and in obese patients, and it's operator dependent. MRI with contrast isn't advantageous for stone detection and is impractical for rapid stone evaluation. Therefore, the best option when contrast administration is not possible is non-contrast CT, because it offers the highest accuracy for identifying stones and assessing obstruction without the risks or limitations of contrast.

3. Test that determines whether the urine of a newborn contains phenylketones is called?

- A. PKU test**
- B. Potassium test**
- C. PSA**
- D. Prothrombin Time**

This item tests your understanding of newborn metabolic screening for phenylketonuria. In PKU, a defect in converting phenylalanine leads to accumulation of phenylketones, such as phenylpyruvic acid, which can be excreted in urine. The test specifically looked for these phenylketones in a newborn's urine, hence it's called the PKU test. Early detection is crucial because, if untreated, PKU can cause intellectual disability and developmental problems, but dietary management can prevent these outcomes. The other options measure different things: potassium tests electrolytes in blood, PSA screens for prostate issues, and prothrombin time assesses blood clotting.

4. Visual examination of a body cavity or canal with a lighted instrument called an endoscope?

- A. Esophagoscopy**
- B. Endoscopy**
- C. Gastroscopy**
- D. ERCP**

Visual examination of a body cavity or canal with a lighted instrument is endoscopy. The endoscope lets you look inside and can sometimes be used for biopsies or treatments. When a specific organ is named, the procedure becomes more precise: examining the esophagus is esophagoscopy, examining the stomach is gastroscopy. ERCP is a specialized endoscopic procedure aimed at the bile and pancreatic ducts, usually with imaging and intervention. So the overall term that fits the description is endoscopy.

5. Visual examination of the esophagus?

- A. Gastroscopy**
- B. Endoscopy**
- C. Esophagoscopy**
- D. Esophagogastroduodenoscopy**

The key idea is naming precision for examining a specific organ. Visual examination of the esophagus is done with an endoscope and is called esophagoscopy—the term literally combines “esophago-” (esophagus) with “-scopy” (viewing). This makes it the most specific choice for inspecting the esophagus. Gastroscopy refers to looking at the upper GI tract with a focus that can include the esophagus and stomach, but it's commonly associated with the stomach. Endoscopy is a general term for looking inside the body with an endoscope and doesn't specify which organ. Esophagogastroduodenoscopy describes the combined examination of the esophagus, stomach, and duodenum, so it's broader than just the esophagus. While it can include the esophagus, it isn't as precise for a visual exam limited to that organ. So, for a direct, specific visual examination of the esophagus, esophagoscopy is the best term.

6. Which imaging modality uses multiple views to create cross-sectional images of the body?

- A. Computed Tomography**
- B. Magnetic Resonance Imaging**
- C. Ultrasound**
- D. X-ray Radiography**

The key idea is creating cross-sectional images by collecting data from many viewpoints around the body. In computed tomography, an X-ray source rotates around the patient while detectors capture transmitted radiation from numerous angles. The resulting projections are processed with reconstruction algorithms to produce axial cross-sectional images (slices) that reveal internal structures in a thin section. These slices can be reformatted into other planes for a fuller view. This angular data collection and slice reconstruction is what sets CT apart from other modalities: plain X-ray radiography gives a single 2D projection; ultrasound builds images from reflected sound waves; MRI uses magnetic fields and radiofrequency signals to generate images without relying on rotating X-ray views.

7. How does a noninvasive vascular study via Doppler ultrasound help diagnose arterial occlusion?

- A. Visualizes the arterial lumen with high-detail CT.**
- B. Measures blood flow velocity and waveforms; abnormal waveforms indicate stenosis or occlusion.**
- C. Measures blood oxygen saturation in tissues.**
- D. Replaces MRI in all cases.**

Doppler ultrasound in this context is about assessing blood flow dynamics, not just anatomy. By using the Doppler effect, it measures how fast the blood cells are moving and shows waveforms that reflect the pattern of flow in the artery. This hemodynamic information reveals whether there is narrowing or a blockage. In a healthy artery, the flow waveform is typically normal and pulsatile. With narrowing (stenosis), the velocity at the narrowed segment increases and the waveform can become dampened or irregular, sometimes with spectral broadening. If the artery is completely occluded, little or no flow is detected beyond the blockage. So, abnormal waveforms and reduced or absent flow point to stenosis or occlusion, making Doppler ultrasound a key noninvasive tool for diagnosing arterial occlusion. Other imaging modalities like CT provide detailed anatomical images of the lumen but are not the same as Doppler flow assessment; tissue oxygen saturation measures are not about flow in vessels, and Doppler ultrasound does not replace MRI in all situations.

8. Which test measures the percentage of erythrocytes in a volume of blood?

- A. Fecal occult blood test
- B. Hematocrit (Hct)**
- C. Laryngoscopy
- D. Glucose tolerance test

The main idea is understanding what hematocrit measures: the proportion of blood volume made up by red blood cells. When a blood sample is spun in a centrifuge, plasma sits on top, a thin layer of white cells and platelets forms, and the bottom bulk is the packed erythrocytes. Hematocrit is the height or volume of that red cell layer expressed as a percentage of the total sample volume. This directly tells you how much of the blood is rbc by volume, which is why it's used to assess red cell mass and volume status. A high hematocrit can indicate more red cells relative to plasma, as in dehydration or polycythemia; a low hematocrit points to fewer red cells, as in anemia, blood loss, or overhydration. It's often part of a complete blood count and is related to hemoglobin concentration and RBC count, with rough relationship $Hb \approx \text{hematocrit} \times 3$. The other tests measure different things: a fecal occult blood test looks for hidden blood in stool; laryngoscopy examines the larynx and vocal cords; a glucose tolerance test assesses how the body handles glucose.

9. What is a key difference between CT and MRI in terms of safety and contraindications?

- A. CT uses ionizing radiation and iodinated contrast; MRI uses strong magnetic fields; contraindicated with certain implants and ferromagnetic devices; gadolinium risk in CKD.**
- B. CT uses no radiation; MRI uses strong magnetic fields.
- C. CT is contraindicated with implants; MRI is safe with any implant.
- D. CT uses gadolinium contrast; MRI uses iodinated contrast.

Safety differences come from how each imaging method interacts with the body. CT uses X-ray beams that deliver ionizing radiation and often iodinated contrast when enhanced imaging is needed. Ionizing radiation carries a small but real cumulative cancer risk, and iodinated contrast can cause allergic reactions or contrast-induced kidney injury in susceptible patients. MRI relies on a strong magnetic field and radiofrequency energy; many ferromagnetic implants or devices are unsafe or require careful evaluation, and when contrast is used it's gadolinium-based, which can pose a risk of nephrogenic systemic fibrosis in people with advanced kidney disease and has other patient-specific considerations. Some implants today are MRI-conditional, but many devices still limit MRI use or require precaution. The other statements are incorrect because CT does involve radiation and iodinated contrast, MRI is not universally safe with any implant, and gadolinium is not used in CT while iodinated contrast is not used in MRI.

10. Which test measures the amount of albumin in the blood?

- A. Audiometry**
- B. Albumin test**
- C. Amniocentesis**
- D. Bilirubin**

Albumin is the main protein circulating in blood plasma, produced by the liver, and it helps maintain blood volume and transport substances. The albumin test directly measures how much albumin is present in the blood, making it useful for assessing liver function, kidney protein loss, nutritional status, and inflammation. It's performed with a blood sample. The other tests check different things: audiometry tests hearing, amniocentesis collects amniotic fluid for fetal testing, and bilirubin testing gauges bilirubin levels related to jaundice and liver function. Since this test specifically quantifies albumin in the blood, it is the correct choice.

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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://diagnostictestsprocedures.examzify.com>

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

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