LMRT ARRT PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://lmrtarrt.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

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

SAMPLE

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. What is a severe allergic reaction also known as?

A. Anaphylaxis

B. Hypersensitivity

C. Shock

D. Asthma attack

2. What is the medical term for a heart attack?

A. Emesis

B. Myocardial infarction (MI)

C. Epistaxis

D. Infarction

3. How is the hepatitis B virus primarily transmitted?

A. Contaminated food

B. Contaminated water

C. Contaminated blood

D. Airborne particles

4. The legal doctrine that holds an employer liable for an employee's negligent acts is known as what?

A. Respondeat Superior

B. Negligence Per Se

C. Vicarious Liability

D. Strict Liability

5. What term describes the malicious sharing of false information verbally?

A. Libel

B. Slander

C. Innuendo

D. Perjury

6. What does a transient ischemic attack represent?

A. A severe heart incident

B. A mild, temporary form of a stroke

C. A lung condition

D. A type of seizure

SAMPLE

7. More than 99% of the energy produced by the electron stream in an X-ray tube is converted into which form?

A. X-rays

B. Heat

C. Ionization

D. Light

8. What is the required minimum standard of lead equivalency for protective gloves?

A. 0.125 mm

B. 0.25 mm

C. 0.5 mm

D. 0.75 mm

9. What type of radiation does lead effectively shield against?

A. Alpha particles

B. Beta particles

C. Gamma rays and X-rays

D. All types of radiation

10. Which adjustment would NOT directly affect the quality of an X-ray image?

A. Changing the anode rotation speed

B. Altering the kVp settings

C. Adjusting the mAs

D. Modifying the focal spot size

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is a severe allergic reaction also known as?

A. Anaphylaxis

B. Hypersensitivity

C. Shock

D. Asthma attack

A severe allergic reaction is known as anaphylaxis. This is a life-threatening response that can occur rapidly after exposure to an allergen, which may include foods, insect stings, medications, or other substances. During anaphylaxis, the body can react with symptoms such as difficulty breathing, swelling of the throat, drop in blood pressure, rapid heartbeat, and even loss of consciousness. The severity of the reaction requires immediate medical intervention, typically with an injection of epinephrine, to reverse the symptoms and stabilize the individual. Hypersensitivity refers to an exaggerated immune response to an antigen but is a broader term that encompasses various types of allergic reactions, not specifically the most severe form. Shock is a state of inadequate blood flow and is not explicitly synonymous with an allergic reaction; it can be a consequence of anaphylaxis. An asthma attack is related to respiratory issues and can be triggered by allergens, but it is not equivalent to anaphylaxis. Understanding the specifics of anaphylaxis and its distinct characteristics helps in recognizing and responding effectively to severe allergic reactions.

2. What is the medical term for a heart attack?

A. Emesis

B. Myocardial infarction (MI)

C. Epistaxis

D. Infarction

Myocardial infarction (MI) is the medical term for a heart attack. It specifically refers to the condition that occurs when blood flow to a part of the heart is blocked, typically by a blood clot, leading to damage or death of the heart muscle. This interruption in blood supply is critical, as heart tissue depends on a steady flow of oxygenated blood to function properly. Understanding the terminology is important for effective communication in healthcare. "Infarction" refers to tissue death due to lack of blood supply more generally, but it does not specify the location or the organ involved. In contrast, "myocardial" explicitly indicates that the tissue in question is the heart muscle itself, making it clear that you are discussing a heart attack. The other terms, such as "emesis," which refers to vomiting, and "epistaxis," which relates to nosebleeds, are not related to cardiac conditions. Thus, the specificity of "myocardial infarction" is crucial in the clinical context of heart health.

3. How is the hepatitis B virus primarily transmitted?

A. Contaminated food

B. Contaminated water

C. Contaminated blood

D. Airborne particles

The hepatitis B virus (HBV) is primarily transmitted through contaminated blood, making this the most accurate choice. The virus can be present in various body fluids, but blood is the most significant route of transmission. Common ways that this transmission occurs include sharing needles among drug users, accidental needle-stick injuries in healthcare settings, and through blood transfusions with infected blood products. Additionally, the virus can also be transmitted through sexual contact when bodily fluids are exchanged. Understanding the transmission routes of hepatitis B is crucial for implementing effective public health measures and preventive strategies. This awareness can help in educating individuals about the risks associated with certain behaviors, leading to better practices that can reduce the likelihood of infection. Contaminated food, contaminated water, and airborne particles do not play a significant role in the transmission of hepatitis B, which further emphasizes the importance of recognizing blood as the primary transmission vehicle in the context of this virus.

SAMPLE

4. The legal doctrine that holds an employer liable for an employee's negligent acts is known as what?

A. Respondeat Superior

B. Negligence Per Se

C. Vicarious Liability

D. Strict Liability

The correct answer, Respondeat Superior, refers to a legal doctrine holding employers responsible for the negligent actions of their employees performed within the scope of their employment. This principle is rooted in the understanding that when employees are acting in their official capacity, they are essentially representing the employer, and therefore, the employer bears some responsibility for their actions. Respondeat Superior essentially creates a link between the actions of the employee and the liability of the employer, emphasizing that employees should be held accountable while also protecting the interests of injured parties seeking compensation. This doctrine is pivotal in legal cases involving workplace incidents, as it facilitates the process of seeking damages from employers rather than placing the burden solely on individual employees. Vicarious Liability, while similar in its implications, refers more broadly to situations where one party is held responsible for the actions of another based on the relationship between them, often used interchangeably with Respondeat Superior but not exclusively linked to employer-employee scenarios. Negligence Per Se pertains to violations of statutes or regulations that automatically constitute negligence without the need for further proof of breach or causation. Strict Liability is a legal concept where a party can be held liable for damages without proof of negligence, typically related to inherently dangerous activities or defective products.

5. What term describes the malicious sharing of false information verbally?

A. Libel

B. Slander

C. Innuendo

D. Perjury

The term that describes the malicious sharing of false information verbally is slander. Slander specifically refers to spoken statements that are harmful and untrue about a person, and such statements can damage the reputation of the individual being discussed. To qualify as slander, the false statement must have been made to a third party and must cause injury to the subject's reputation. In contrast, libel refers to written or published defamatory statements rather than spoken ones. Innuendo involves an implication or indirect suggestion, often leaving the gist of the statement open to interpretation, without necessarily being outright false. Perjury constitutes the act of lying under oath, which is a legal term but does not apply to the verbal sharing of false information outside of a formal legal context. Understanding these distinctions is essential in discerning the appropriate legal terms associated with defamatory statements.

SAMPLE

6. What does a transient ischemic attack represent?

A. A severe heart incident

B. A mild, temporary form of a stroke

C. A lung condition

D. A type of seizure

A transient ischemic attack (TIA) signifies a mild, temporary form of a stroke. It occurs when there is a temporary reduction in blood flow to a part of the brain, leading to stroke-like symptoms that typically last for a short duration, usually less than 24 hours. TIAs are often considered warning signs for future strokes, as they indicate that there may be underlying vascular issues that could lead to a more severe event. The symptoms of a TIA are similar to those of a stroke and can include sudden numbness, confusion, trouble speaking, and difficulty walking, among others. Importantly, because these symptoms resolve quickly and do not result in permanent brain damage, TIAs are essential indicators for preventative strategies for individuals at risk of a full-blown stroke. This understanding is crucial because recognizing a TIA and seeking immediate medical attention can lead to interventions that may prevent further cerebrovascular incidents. Engaging with TIA symptoms and their implications enables healthcare providers and patients to better address and manage the risk of future strokes.

7. More than 99% of the energy produced by the electron stream in an X-ray tube is converted into which form?

A. X-rays

B. Heat

C. Ionization

D. Light

In an X-ray tube, the primary function is to generate X-rays by directing a stream of high-energy electrons at a targeted metal anode, usually made of tungsten. While the goal is to produce X-rays, the vast majority—more than 99%—of the energy from the electron stream is actually converted into heat rather than useful X-ray radiation. This is due to the physics of how X-rays are produced. When high-velocity electrons collide with the anode, kinetic energy is transferred. Although some of this energy is converted to X-rays through processes like Bremsstrahlung and characteristic radiation, the majority results in heat due to inelastic collisions within the material of the anode. This heat buildup is significant and requires efficient cooling systems in the X-ray tubes to prevent damage. To summarize, while X-rays are the intended output, the overwhelming conversion of energy into heat highlights the inefficiency of the process, making heat the primary byproduct in X-ray generation.

8. What is the required minimum standard of lead equivalency for protective gloves?

A. 0.125 mm

B. 0.25 mm

C. 0.5 mm

D. 0.75 mm

The required minimum standard of lead equivalency for protective gloves is established to ensure adequate protection for healthcare workers and patients from ionizing radiation during procedures. Protective gloves must have a minimum lead equivalency of 0.25 mm to effectively attenuate the radiation exposure that may occur in the medical imaging environment, particularly during interventional radiology and fluoroscopy procedures. This standard helps reduce the risk of radiation-induced harm by ensuring that gloves provide a sufficient barrier to radiation, balancing protection with ease of movement and dexterity needed for procedures. The choice of 0.25 mm is recognized as an effective compromise, providing necessary protection while maintaining functionality.

SAMPLE

9. What type of radiation does lead effectively shield against?

A. Alpha particles

B. Beta particles

C. Gamma rays and X-rays

D. All types of radiation

Lead is particularly effective at shielding against gamma rays and X-rays due to its high atomic number and density. Gamma rays and X-rays are forms of electromagnetic radiation that have high penetrating power, making them difficult to stop. The dense atomic structure of lead provides the necessary mass and electron density to attenuate these types of radiation effectively. While lead does offer some protection against alpha and beta particles, it is not as necessary due to the nature of these particles. Alpha particles, for example, can be easily stopped by a sheet of paper or even the outer layer of human skin. Beta particles can penetrate further than alpha particles but can still be effectively shielded by materials like plastic or glass. Thus, while lead can provide some shielding against all types of radiation to varying degrees, its primary and most effective use is in protecting against gamma rays and X-rays.

10. Which adjustment would NOT directly affect the quality of an X-ray image?

A. Changing the anode rotation speed

B. Altering the kVp settings

C. Adjusting the mAs

D. Modifying the focal spot size

When considering factors that influence the quality of an X-ray image, each of the choices plays a role, except for changing the anode rotation speed. The anode rotation speed primarily affects the heat dissipation and overall efficiency of the X-ray tube, allowing for longer exposure times and higher tube outputs without overheating. While it can indirectly influence the overall performance of the X-ray system, it does not directly alter the quality, contrast, or sharpness of the X-ray image itself. In contrast, adjusting the kilovolt peak (kVp) settings directly affects the penetration power of the X-ray beam, influencing contrast and image quality. Higher kVp values lead to greater penetration, resulting in images that can better demonstrate different tissue densities. Similarly, adjusting the milliampere-seconds (mAs) impacts the quantity of X-rays produced, directly correlating to the image density; a lower mAs may result in an underexposed image, while a higher mAs increases exposure and can improve image clarity. Modifying the focal spot size relates to image sharpness; a smaller focal spot produces better detail, particularly in imaging structures that require high resolution. Therefore, while the anode rotation speed is crucial for the operational efficiency of the X-ray

SAMPLE

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://lmrtarrt.examzify.com

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

SAMPLE