

MEDICAL TECHNOLOGY LICENSURE EXAMINATION (MTLE) POST-LECTURE PRACTICE EXAM (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 is the normal range for adult human body temperature?**
 - A. 35.0°C to 36.5°C (95°F to 97°F)
 - B. 36.1°C to 37.2°C (97°F to 99°F)
 - C. 37.5°C to 38.5°C (99°F to 101°F)
 - D. 38.5°C to 39.5°C (101°F to 103°F)
- 2. What is the significance of bilirubin in the blood?**
 - A. To assess kidney filtration
 - B. To evaluate liver function and hemolysis
 - C. To diagnose diabetes
 - D. To check for heart disease
- 3. What is one of the functions of the PRC?**
 - A. Appoint members of the various professional regulatory boards
 - B. Recommend members of the various boards for appointment to the president
 - C. Remove any member of the professional regulatory boards
 - D. Approve the accreditation of medical technology schools
- 4. What is the most important personal protective equipment needed before entering a TB laboratory?**
 - A. Face shield
 - B. Mask
 - C. Gloves
 - D. N95 respirator
- 5. Which blood component is primarily affected by anticoagulants during collection?**
 - A. Platelets
 - B. Plasma only
 - C. Red blood cells
 - D. Clotting factors

- 6. In the proper procedure for combining acid and water, which should be added to which?**
- A. Acid is added to water
 - B. Water is slowly added to acid
 - C. Water is added to acid
 - D. Both solutions are added simultaneously
- 7. How is the ABO blood group determined?**
- A. By measuring blood saturation levels
 - B. By the presence of specific antibodies in plasma
 - C. By the presence or absence of antigens on red blood cells
 - D. By analyzing genetic markers
- 8. When a healthcare provider overrides a patient's wishes for their betterment, what is this practice called?**
- A. Paternalism
 - B. Assent
 - C. Non-maleficence
 - D. Substituted judgement
- 9. Which of the following describes "aseptic technique"?**
- A. A method of accelerating chemical reactions
 - B. A set of practices used to prevent contamination during medical procedures
 - C. A protocol for testing blood samples
 - D. A technique for sterilizing medical instruments
- 10. Which of the following is NOT a qualification for examination as stipulated in RA 5527?**
- A. BSMT graduate
 - B. In good health
 - C. Of good moral character
 - D. 21 years of age

Answers

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

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Explanations

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1. What is the normal range for adult human body temperature?

- A. 35.0°C to 36.5°C (95°F to 97°F)
- B. 36.1°C to 37.2°C (97°F to 99°F)**
- C. 37.5°C to 38.5°C (99°F to 101°F)
- D. 38.5°C to 39.5°C (101°F to 103°F)

The normal range for adult human body temperature typically falls between 36.1°C to 37.2°C (97°F to 99°F). This range reflects the average body temperature in healthy adults and is important for assessing a person's health status. Body temperature can be influenced by various factors, such as time of day, activity level, and individual physiological differences. The average body temperature considered normal can vary slightly from person to person, and it can also differ based on the method of measurement (oral, rectal, axillary, or tympanic). Nonetheless, the range provided in the correct answer aligns with established medical guidelines and literature on normal human thermoregulation. It serves as a critical standard for healthcare professionals in diagnosing and managing conditions related to body temperature abnormalities.

2. What is the significance of bilirubin in the blood?

- A. To assess kidney filtration
- B. To evaluate liver function and hemolysis**
- C. To diagnose diabetes
- D. To check for heart disease

The significance of bilirubin in the blood primarily lies in its role as a marker for evaluating liver function and detecting hemolysis. Bilirubin is a byproduct of the breakdown of hemoglobin in red blood cells. When red blood cells are destroyed at an increased rate, or when the liver is unable to adequately process bilirubin, elevated levels can be detected in the blood. In assessing liver function, bilirubin levels help determine how well the liver is performing its duties, including metabolizing and excreting various substances. For example, abnormal bilirubin levels can indicate liver diseases such as hepatitis, cirrhosis, or bile duct obstruction. Additionally, increased bilirubin levels can be indicative of hemolytic anemia, where an excessive breakdown of red blood cells is occurring. This makes monitoring bilirubin levels an essential part of clinical evaluations related to liver health and overall hematological status, allowing for timely intervention and treatment as necessary.

3. What is one of the functions of the PRC?

- A. Appoint members of the various professional regulatory boards
- B. Recommend members of the various boards for appointment to the president**
- C. Remove any member of the professional regulatory boards
- D. Approve the accreditation of medical technology schools

The Professional Regulation Commission (PRC) plays a pivotal role in the regulation and oversight of various professions within the Philippines, including the field of medical technology. One of the primary functions of the PRC is to recommend qualified individuals for appointment as members of the different professional regulatory boards to the president. This process ensures that individuals serving on these boards are fit to help govern their respective professions, uphold standards, and implement regulations effectively. This recommendation process is essential for maintaining the integrity and professionalism within various fields, including health care. By making informed recommendations, the PRC contributes to the ongoing improvement of professional practice and public safety. The other functions mentioned, such as appointing members outright, removing board members, or approving accreditation of medical technology schools, represent different aspects of regulatory duties but are not directly aligned with the specified function of recommending members for appointment to the president.

4. What is the most important personal protective equipment needed before entering a TB laboratory?

- A. Face shield
- B. Mask
- C. Gloves
- D. N95 respirator**

In a tuberculosis (TB) laboratory, the most critical piece of personal protective equipment is the N95 respirator. This specialized mask is designed to filter out at least 95% of airborne particles, making it highly effective in protecting healthcare workers from inhaling infectious aerosols that may contain Mycobacterium tuberculosis, the bacteria responsible for TB. Given that TB can be spread through the air when an infected person coughs or sneezes, the N95 respirator is essential for providing a secure fit that ensures a higher level of respiratory protection compared to standard surgical masks. While a face shield, regular mask, and gloves contribute to overall safety and protection in the laboratory, they do not provide the same level of protection against airborne contaminants. A face shield primarily protects against splashes and may shield the face but does not filter air. Regular masks may not fit tightly enough, allowing airborne pathogens to enter. Gloves are important for preventing contact with contaminated surfaces and specimens, but they do not address the risk associated with inhalation of infectious particles. Therefore, to effectively protect against the aerosol transmission of TB, wearing an N95 respirator is paramount.

5. Which blood component is primarily affected by anticoagulants during collection?

- A. Platelets
- B. Plasma only
- C. Red blood cells
- D. Clotting factors**

The correct choice indicates that clotting factors are primarily affected by anticoagulants during the collection of blood. Anticoagulants are substances that prevent blood from clotting, allowing for the preservation of the liquid components of blood, particularly plasma. By inhibiting the clotting process, these substances help maintain the functionality of clotting factors in plasma, which are critical for coagulation processes. When anticoagulants are used, such as EDTA, heparin, or citrate, they bind to calcium ions or inhibit various enzymes involved in the coagulation cascade. This allows for the accurate assessment of clotting factors and their activity without interference from the clotting process that would normally occur if blood were left to stand unaided. While anticoagulants may have some influence on platelets, red blood cells, and plasma, the primary role of these agents is to prevent the activation of the clotting factors. In a properly anti-coagulated sample, the focus is predominantly on preserving the integrity and functionality of these factors for various diagnostic purposes.

6. In the proper procedure for combining acid and water, which should be added to which?

- A. Acid is added to water**
- B. Water is slowly added to acid
- C. Water is added to acid
- D. Both solutions are added simultaneously

The proper procedure for combining acid and water is that acid should be added to water. This approach is crucial for safety reasons. When an acid is mixed with water, the reaction is exothermic, meaning it releases heat. If water is added to acid instead, the heat generated can cause the mixture to bubble and spatter, potentially leading to hazardous situations, such as chemical burns or splashes of concentrated acid. By adding acid to water, the acid is diluted gradually, allowing the heat to dissipate more evenly throughout the solution. This method helps to ensure that the water can absorb the heat generated without boiling violently, which can occur if a concentrated acid is introduced into a smaller volume of water too quickly. Therefore, following this established protocol is important for safe laboratory practices.

7. How is the ABO blood group determined?

- A. By measuring blood saturation levels
- B. By the presence of specific antibodies in plasma
- C. By the presence or absence of antigens on red blood cells**
- D. By analyzing genetic markers

The classification of blood into the ABO system relies fundamentally on the presence or absence of specific antigens on the surface of red blood cells. In this system, there are four main blood types: A, B, AB, and O. The blood type is determined by the type of antigens present: - Type A has A antigens on the red blood cells and anti-B antibodies in the plasma. - Type B has B antigens on the red blood cells and anti-A antibodies in the plasma. - Type AB has both A and B antigens and no anti-A or anti-B antibodies. - Type O has neither A nor B antigens and contains both anti-A and anti-B antibodies. Identifying these antigens is crucial because they play a significant role in blood transfusions and organ transplants; mismatched blood types can lead to serious and potentially fatal immune reactions. Therefore, analyzing the antigens present on the red blood cells is the precise method used to determine a person's ABO blood group. This multifunctional characteristic is key in medical settings for ensuring compatibility during blood transfusions and surgeries.

8. When a healthcare provider overrides a patient's wishes for their betterment, what is this practice called?

- A. Paternalism**
- B. Assent
- C. Non-maleficance
- D. Substituted judgement

The practice of overriding a patient's wishes for what the healthcare provider believes is in the patient's best interest is known as paternalism. This term is derived from the Latin word "pater," meaning father, and reflects an approach where the healthcare provider takes a protective role, making decisions for the patient under the assumption that it will lead to better health outcomes. Paternalism often comes into play in situations where patients may not be fully informed about their condition or the implications of their choices, or when they refuse treatment that is deemed necessary for their health. The healthcare provider, in this case, acts with the intention of benefitting the patient, even if it means disregarding their autonomous wishes. In contrast, the other terms have different meanings: assent refers to an individual's agreement to treatment after being informed, non-maleficance is the ethical obligation to avoid causing harm to patients, and substituted judgment involves making decisions based on what the patient would have wanted if they were able to express their wishes.

9. Which of the following describes "aseptic technique"?

- A. A method of accelerating chemical reactions
- B. A set of practices used to prevent contamination during medical procedures**
- C. A protocol for testing blood samples
- D. A technique for sterilizing medical instruments

Aseptic technique is accurately described as a set of practices used to prevent contamination during medical procedures. The primary goal of aseptic technique is to minimize the risk of introducing pathogens into sterile environments or open wounds, which is crucial for patient safety and for preventing infections. This technique involves various practices such as proper hand hygiene, the use of sterile gloves and instruments, and maintaining a sterile field during surgical procedures or sample collections. It is fundamental in settings like operating rooms, laboratories, and during any situation where infection control is vital. Other options describe different concepts. The first option refers to methods that speed up chemical reactions, which is not related to maintaining sterility or preventing contamination. The third option describes a protocol specifically for testing blood samples, which may or may not entirely involve aseptic techniques but does not define it. Finally, while sterilizing medical instruments is an important aspect of infection control, it does not encompass the broader practices and principles of maintaining a sterile environment that are part of aseptic technique.

10. Which of the following is NOT a qualification for examination as stipulated in RA 5527?

- A. BSMT graduate
- B. In good health
- C. Of good moral character
- D. 21 years of age**

The requirement regarding age for qualifications to take the licensure examination in the context of RA 5527 does not explicitly state a minimum age of 21. The law prioritizes educational qualifications, physical health, and ethical standards, ensuring that candidates hold a Bachelor of Science in Medical Technology, are in good health, and possess good moral character. While many licensing bodies set an age requirement, RA 5527 focuses on the educational and moral criteria essential for practice in the medical technology field rather than specifying an age threshold of 21. This understanding emphasizes that candidates must meet educational standards and personal integrity, which are crucial for public trust in healthcare professionals.

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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://mtlepostlecture.examzify.com>

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

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