

PMLS MEDICAL TECHNOLOGY EDUCATION PRACTICE EXAM (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. Which enzyme is most specific for hepatocellular injury?**
 - A. AST
 - B. ALP
 - C. GGT
 - D. ALT
- 2. Blood Banking: How many hours?**
 - A. 200 hours
 - B. 300 hours
 - C. 250 hours
 - D. 1664 hours
- 3. Participating in professional organizations often facilitates which of the following outcomes for members?**
 - A. Increases annual dues
 - B. Creates long-term linkages and connections with other professionals
 - C. Replaces formal qualifications
 - D. Limits access to resources
- 4. Which of the following is a student-focused professional organization in the Philippines?**
 - A. Philippine Association of Medical Technologists
 - B. Philippine Association of Schools of Medical Technology and Public Health
 - C. American Society for Microbiology
 - D. Philippine Society of Medical Technology Students
- 5. Which electrolyte abnormality is closely associated with life-threatening arrhythmias and is routinely checked in chemistry panels?**
 - A. Sodium
 - B. Calcium
 - C. Magnesium
 - D. Potassium

- 6. In epidemiology, which statement best describes prevalence?**
- A. The rate of new cases over a defined period
 - B. The probability of developing the disease during a given time
 - C. The proportion of individuals with the disease in a population at a given time
 - D. The ratio of cured to total cases
- 7. For coagulation studies, what is the standard blood-to-anticoagulant ratio using sodium citrate?**
- A. 1:1
 - B. 9:1
 - C. 1:9
 - D. 3:1
- 8. What is the purpose of Levey-Jennings QC charts?**
- A. To monitor control results over time for shifts/trends and ensure stable assay performance
 - B. To document instrument calibration times
 - C. To track reagent lots
 - D. To record patient birthdays
- 9. Which subject is allocated 220 hours in the program curriculum?**
- A. Immunology and Serology
 - B. Laboratory Management
 - C. Phlebotomy
 - D. Histopathology Techniques and Cytology
- 10. Which statement accurately describes the establishment of CHED?**
- A. It has no relation to higher education.
 - B. It regulates only private higher education institutions.
 - C. It was established by a different act in 1984.
 - D. It was established on May 18, 1994 through Republic Act No. 7722.

Answers

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

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Explanations

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1. Which enzyme is most specific for hepatocellular injury?

- A. AST
- B. ALP
- C. GGT
- D. ALT**

Alanine aminotransferase (ALT) is the enzyme most specific for hepatocellular injury because it is highly concentrated in liver cells and elevations mainly reflect damage to hepatocytes. AST is also present in the liver but exists in many other tissues such as muscle, heart, and kidneys, so it is less specific for liver cell injury. ALP and GGT are more indicative of cholestasis or biliary injury; ALP is also found in bone, and GGT can be elevated with various liver conditions and alcohol use, making them less specific for hepatocyte damage. In hepatocellular injury, ALT tends to rise prominently, providing a clearer signal of liver cell damage, whereas AST can be influenced by other tissues. If the pattern shows AST disproportionately higher than ALT (AST/ALT ratio > 2), that can suggest alcoholic liver disease, but ALT remains the more liver-specific marker for hepatocellular injury.

2. Blood Banking: How many hours?

- A. 200 hours**
- B. 300 hours
- C. 250 hours
- D. 1664 hours

The test is measuring the typical amount of hands-on clinical time needed in blood banking during medical laboratory education. A standard blood bank rotation usually requires about 200 hours of direct lab experience, which provides enough time to perform essential tasks such as ABO/Rh typing, antibody screening, antibody identification, crossmatching, compatibility testing, donor processing, and basic transfusion service operations and quality checks. This duration balances thorough exposure with a practical curriculum length, often reflecting around 8 weeks of full-time work. The other options are less typical for a single blood bank rotation. Significantly more hours (like 1664) would imply a much longer practicum, closer to a year, which isn't standard for a focused blood bank experience. A few hundred hours (250 or 300) are possible in some programs, but 200 hours remains the commonly cited benchmark for this specific rotation.

3. Participating in professional organizations often facilitates which of the following outcomes for members?

- A. Increases annual dues
- B. Creates long-term linkages and connections with other professionals**
- C. Replaces formal qualifications
- D. Limits access to resources

Building professional networks and long-term connections is the key outcome of participating in professional organizations. By engaging in meetings, committees, and forums, members form relationships that endure over time, enabling mentorship, collaboration on projects, sharing of best practices, and opportunities such as referrals and job leads. This network supports ongoing learning and career advancement well beyond any single event. The other possibilities don't fit as well: dues are a cost rather than a benefit, membership doesn't replace formal qualifications, and access to resources is typically broadened—through journals, conferences, and educational programs—rather than limited.

4. Which of the following is a student-focused professional organization in the Philippines?

- A. Philippine Association of Medical Technologists
- B. Philippine Association of Schools of Medical Technology and Public Health
- C. American Society for Microbiology
- D. Philippine Society of Medical Technology Students**

The key idea is recognizing which organization is built around students in the field. The Philippine Society of Medical Technology Students is designed specifically for students, providing student-focused activities, events, and a platform that represents the student perspective within medical technology. This makes it the best fit for a student-focused professional organization in the Philippines. The other groups serve different roles: a professional body for licensed medical technologists, an association of schools rather than individuals, and an international society not specific to the Philippines.

5. Which electrolyte abnormality is closely associated with life-threatening arrhythmias and is routinely checked in chemistry panels?

- A. Sodium
- B. Calcium
- C. Magnesium
- D. Potassium**

Potassium directly shapes the heart's electrical activity. The heart's resting membrane potential and the way it repolarizes are highly sensitive to extracellular potassium levels, so even small changes can dramatically alter conduction and trigger dangerous rhythms. That makes potassium disturbances a common, urgent cause of life-threatening arrhythmias. Because of this, potassium is consistently included in chemistry panels (like CMP or BMP) to detect imbalances early and manage them before they lead to arrhythmias. On an ECG, high potassium can cause peaked T waves and widening of the QRS, potentially progressing to severe conduction problems; low potassium can produce U waves and prolonged repolarization, increasing the risk of dangerous rhythms as well.

6. In epidemiology, which statement best describes prevalence?

- A. The rate of new cases over a defined period
- B. The probability of developing the disease during a given time
- C. The proportion of individuals with the disease in a population at a given time**
- D. The ratio of cured to total cases

Prevalence is the proportion of people in a population who have a disease at a specific time. It's a snapshot of disease burden, usually expressed as a percentage or per 1,000 people, calculated by dividing the number of existing cases (both old and new) by the total population at that moment. This differs from incidence, which counts new cases that arise over a defined period and is a rate rather than a simple proportion. It also differs from the idea of risk or probability of developing the disease during a time frame, which refers to the chance of becoming diseased during that interval. Prevalence rises when people live longer with the disease or when many new cases occur and persist, so it reflects both how often the disease occurs and how long people stay affected. The ratio of cured to total cases describes outcomes among known cases, not how many people in the population have the disease at a given time.

7. For coagulation studies, what is the standard blood-to-anticoagulant ratio using sodium citrate?

- A. 1:1
- B. 9:1**
- C. 1:9
- D. 3:1

Calcium chelation by sodium citrate is used to keep the blood from clotting during handling. For coagulation studies, the blood and anticoagulant are mixed in a nine-to-one ratio. This precise proportion sets the citrate concentration so that calcium is adequately bound without overdoing it, ensuring accurate clotting measurements. Too much anticoagulant makes clotting times appear longer than they really are, while too little can allow clotting to start in the tube and compromise results. In practice, tubes containing sodium citrate are prepared to maintain this nine-to-one ratio.

8. What is the purpose of Levey-Jennings QC charts?

- A. To monitor control results over time for shifts/trends and ensure stable assay performance**
- B. To document instrument calibration times
- C. To track reagent lots
- D. To record patient birthdays

Levey-Jennings charts are quality control tools used to monitor control results over time, helping to detect shifts and trends and ensure the assay's performance stays stable. By plotting control measurements on a time axis with a central mean line and warning/limit lines (typically at ± 1 , ± 2 , and ± 3 standard deviations), you can see when results drift, bias, or exhibit increasing variability. If points stay within limits and show no non-random patterns, the assay is considered in control; if patterns or points breach the limits occur, it signals the need to investigate potential issues with precision or accuracy. This is why the purpose is to monitor control results over time for shifts/trends and maintain reliable assay performance. The other options refer to calibration timing, reagent lot tracking, or patient data, which are not what Levey-Jennings charts track.

9. Which subject is allocated 220 hours in the program curriculum?

- A. Immunology and Serology
- B. Laboratory Management
- C. Phlebotomy
- D. Histopathology Techniques and Cytology

In curriculum planning, the number of hours a subject receives reflects how much theory plus hands-on practice is needed to master it. The subject allocated the most time here—around 220 hours—is Immunology and Serology. This area covers how the immune system works, how antibodies and antigens interact, and the various serologic techniques used to detect these interactions. It also includes critical applications like blood banking, crossmatching, infectious disease serology, autoimmune serology, and the related quality control and interpretation skills. Mastery in this field requires both a solid conceptual foundation and extensive practical experience with a range of procedures, instrument use, result interpretation, and troubleshooting. That combination typically justifies a larger, more sustained block of instructional time. Phlebotomy centers on collecting specimens and ensuring proper handling and safety—important skills, but often taught as focused, procedure-based training with fewer hours dedicated to it. Histopathology Techniques and Cytology involve tissue processing and microscopic evaluation, which are substantial but tend to be organized in blocks that differ from the comprehensive theory-plus-practice focus seen in immunology and serology. Laboratory Management covers operations, quality systems, and oversight, which are essential but usually distributed across management-oriented content rather than being a primary bench-science block. So the greater allocation to Immunology and Serology fits its breadth of concepts and the depth of hands-on technique required, making it the best match for the 220-hour designation.

10. Which statement accurately describes the establishment of CHED?

- A. It has no relation to higher education.
- B. It regulates only private higher education institutions.
- C. It was established by a different act in 1984.
- D. It was established on May 18, 1994 through Republic Act No. 7722.

Establishing CHED centers on creating a single national authority for higher education. It was established on May 18, 1994 by Republic Act No. 7722, the Higher Education Act of 1994. This law created CHED to formulate and implement policies, set standards, supervise accreditation, and oversee both public and private higher education institutions. That scope is why it isn't limited to private schools, and it distinguishes CHED from the basic education sector (handled by DepEd) and from TESDA's focus on technical-vocational programs. The act was in 1994, not 1984.

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://pmlsmedteched.examzify.com>

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

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