

# Clinical II Lab Practical - Lab supplies 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. During Diff-Quik staining, how many times should the slide be dipped in each solution?**
  - A. 10 times**
  - B. 5 times**
  - C. 15 times**
  - D. 20 times**
  
- 2. Lavender top tube description.**
  - A. Additive- EDTA; Centrifuge ASAP; Sample- EDTA plasma; Test- ACTH.**
  - B. Additive- EDTA; Centrifuge ASAP; Sample- Plasma; Test- ACTH.**
  - C. Additive- EDTA; Centrifuge ASAP; Sample- Serum; Test- ACTH.**
  - D. Additive- EDTA; Centrifuge ASAP; Sample- Whole blood; Test- ACTH.**
  
- 3. If MCHC/MCH is normal, cells are what?**
  - A. Hyperchromic**
  - B. Hypochromic**
  - C. Normochromic**
  - D. Anemic**
  
- 4. If a PCV is 39%, what is the approximate red cell count?**
  - A.  $6.5 \times 10^6$ /cu mm**
  - B.  $2.0 \times 10^6$ /cu mm**
  - C.  $10.0 \times 10^6$ /cu mm**
  - D.  $20.0 \times 10^6$ /cu mm**
  
- 5. How is the average platelet count per field calculated in this procedure?**
  - A. Multiply by 10**
  - B. Add counts and divide by 10**
  - C. Add counts and divide by 5**
  - D. Subtract from 10**

- 6. Which item is described as used to calculate PCV of a blood sample?**
- A. PCV card reader**
  - B. Hemocytometer**
  - C. Standard WBC counting device**
  - D. Hematocrit tubes**
- 7. In the packed cell volume (PCV) procedure, after centrifugation, which line on the scale indicates the PCV percent?**
- A. The interface between the red blood cells and plasma on the scale.**
  - B. The line at the 0 mark on the scale.**
  - C. The line at the 100 mark on the scale.**
  - D. The bottom edge of the capillary tube.**
- 8. What is the normal TP value for young mammals?**
- A. 4-6 g/dl**
  - B. 6-8 g/dl**
  - C. 2-4 g/dl**
  - D. 5-7 g/dl**
- 9. In a feathered edge preparation, which statement best describes the cell arrangement?**
- A. Cells have even more space between each other**
  - B. Single layer cells**
  - C. Where you count**
  - D. Feathered edge region**
- 10. Blue top blood tube is associated with which test?**
- A. Test- Chemistry**
  - B. Test- Hematology**
  - C. Test- Endocrinology**
  - D. Test- Comparative Coagulations**

## Answers

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

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## **Explanations**

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1. During Diff-Quik staining, how many times should the slide be dipped in each solution?

- A. 10 times**
- B. 5 times
- C. 15 times
- D. 20 times

In Diff-Quik staining, how long the slide sits in each solution is controlled by doing a set number of quick dips, which standardizes how the dyes interact with the cells. About ten rapid dips in each solution provides enough dye exposure to achieve clear nuclear detail and balanced cytoplasmic color without oversaturating the slide. If you dip fewer times, staining can be too pale and parts of the specimen may be hard to see; dipping too many times can lead to excessive staining and a muddy background. Following the common protocol of ten dips per solution helps ensure consistent, reproducible results across slides, which is why this option is the best choice.

2. Lavender top tube description.

- A. Additive- EDTA; Centrifuge ASAP; Sample- EDTA plasma; Test- ACTH.**
- B. Additive- EDTA; Centrifuge ASAP; Sample- Plasma; Test- ACTH.
- C. Additive- EDTA; Centrifuge ASAP; Sample- Serum; Test- ACTH.
- D. Additive- EDTA; Centrifuge ASAP; Sample- Whole blood; Test- ACTH.

Lavender top tubes contain EDTA, an anticoagulant that prevents blood from clotting. Because clotting is inhibited, the specimen in these tubes yields plasma after centrifugation rather than serum. ACTH testing uses plasma, and since ACTH is unstable and degrades quickly, the sample should be centrifuged promptly to separate the plasma (with EDTA) as soon as possible. That's why the best description is: Additive—EDTA; Centrifuge ASAP; Sample—EDTA plasma; Test—ACTH. Serum would not be correct here because it comes from clotted blood, not an EDTA-treated specimen, and whole blood isn't the preferred sample type for ACTH testing.

3. If MCHC/MCH is normal, cells are what?

- A. Hyperchromic
- B. Hypochromic
- C. Normochromic**
- D. Anemic

MCH and MCHC measure how much hemoglobin each red blood cell contains and how concentrated it is inside the cell. When both values are normal, this means each cell has the typical amount of hemoglobin and normal color, so the cells are described as normochromic. If cells were hyperchromic, they would appear darker due to more hemoglobin per cell (a higher-than-normal hemoglobin content per cell). If they were hypochromic, they would look paler because they have less hemoglobin per cell. Anemia refers to a broader condition of reduced oxygen-carrying capacity of the blood, which can occur with normal-colored cells if overall red blood cell mass is low, or with many other combinations, but it doesn't specify the per-cell color.

4. If a PCV is 39%, what is the approximate red cell count?

- A.  $6.5 \times 10^6/\text{cu mm}$**
- B.  $2.0 \times 10^6/\text{cu mm}$
- C.  $10.0 \times 10^6/\text{cu mm}$
- D.  $20.0 \times 10^6/\text{cu mm}$

Hematocrit (PCV) reflects both how many red cells there are and how large they are, via the relation that hematocrit is roughly the product of red cell count and mean cell volume (MCV). To estimate the red cell count from PCV, you use:  $\text{RBC count} \approx \text{Hct fraction} \times 10^9 / \text{MCV}$ , with RBC in millions per microliter and MCV in femtoliters. A PCV of 0.39 and assuming an MCV around 60 fL (a microcytic, smaller cell) gives  $\text{RBC count} \approx 0.39 \times 10^9 / 60 \approx 6.5 \times 10^6/\mu\text{L}$ . That aligns with the given answer. If you used a larger MCV (around 90 fL, more typical of normocytic cells), the estimate would drop to about  $4.3\text{--}4.9 \times 10^6/\mu\text{L}$ , illustrating why PCV alone needs MCV for precise RBC counting. The other numeric values would require implausibly small or large MCVs for a simple approximate calculation.

5. How is the average platelet count per field calculated in this procedure?

- A. Multiply by 10
- B. Add counts and divide by 10**
- C. Add counts and divide by 5
- D. Subtract from 10

The key idea is to find the mean by distributing the total across the number of observations you made. In this platelet counting procedure, platelets are counted in several high-power fields—typically ten. To get the average per field, you add all the counts from those fields and divide by ten. This gives the mean number of platelets observed per field, which is the value used for further estimation. Multiplying the total by ten would inflate the value, since you're not scaling up but averaging. Dividing by five would assume you only counted five fields, which isn't the case. Subtracting from ten has no meaningful interpretation in calculating an average.

6. Which item is described as used to calculate PCV of a blood sample?

- A. PCV card reader**
- B. Hemocytometer
- C. Standard WBC counting device
- D. Hematocrit tubes

Packed cell volume measures the percentage of blood that is made up of red blood cells. To obtain PCV, you fill a tiny capillary tube with blood, seal it, then spin it in a centrifuge. The packed red cells settle at the bottom, plasma stays on top, and the PCV is read as the proportion of the tube occupied by the red cell layer. The instrument used for this is a hematocrit tube (often read with a hematocrit/microhematocrit reader). Other devices listed are for different purposes—counting cells under a microscope or handling white blood cell counts—so they don't measure PCV.

7. In the packed cell volume (PCV) procedure, after centrifugation, which line on the scale indicates the PCV percent?

A. The interface between the red blood cells and plasma on the scale.

**B. The line at the 0 mark on the scale.**

C. The line at the 100 mark on the scale.

D. The bottom edge of the capillary tube.

The main idea is that the PCV percent is read from where the red blood cell layer meets the plasma on the scale printed on the capillary tube. After centrifugation, the cells form a compact bottom layer and the plasma sits on top; the height of the red cell column relative to the total tube height determines the PCV. The line at that interface on the scale gives the percentage of blood volume occupied by red cells. The bottom edge of the capillary tube marks how far the red cell column extends, but the PCV value comes from the interface line, not from the tube's bottom edge.

8. What is the normal TP value for young mammals?

**A. 4-6 g/dl**

B. 6-8 g/dl

C. 2-4 g/dl

D. 5-7 g/dl

Total protein reflects the combined amount of albumin and globulins in the blood. In young mammals, the liver and immune system are still maturing and overall protein reserves are smaller, so their baseline level sits lower than in adults. A normal TP around 4 to 6 g/dL is typical for many young animals, whereas adults usually trend higher. If a young animal shows a TP above this range, dehydration or ongoing inflammation can push it up by concentrating the proteins. If TP is notably lower, it can indicate inadequate protein intake, malnutrition, or a protein-losing condition, which can be more impactful in a growing youngster. As the animal matures, TP values typically rise toward adult reference ranges.

9. In a feathered edge preparation, which statement best describes the cell arrangement?

A. Cells have even more space between each other

**B. Single layer cells**

C. Where you count

D. Feathered edge region

The feathered edge shows cells laid out in a single layer. In that thin tail of the smear, cells are spread into one plane with little to no overlap, which lets each cell be seen and counted clearly. This monolayer arrangement is what makes the feathered edge ideal for accurate morphological assessment. Other descriptions point to spacing or just naming the region, but they don't capture the essential idea that the cells occupy one cell-thick layer at the edge.

**10. Blue top blood tube is associated with which test?**

- A. Test- Chemistry
- B. Test- Hematology
- C. Test- Endocrinology
- D. Test- Comparative Coagulations**

Blue top tubes contain sodium citrate, an anticoagulant that binds calcium to prevent clotting and preserve plasma for testing. Coagulation tests rely on measuring the clotting process in plasma, not serum, and require a precise blood-to-anticoagulant ratio (usually 9:1). This makes blue-top tubes the standard for coagulation studies such as PT, aPTT, INR, and related coagulation panels, sometimes referred to as Comparative Coagulations. In contrast, chemistry tests typically use serum or different anticoagulants, and routine hematology uses lavender tubes with EDTA.

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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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://clinical2labpracticalsuppliesprocedures.examzify.com>**

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

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